

Report
On an Inquiry into the Silk Industry
in India

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REPORT
ON AN INQUIRY INTO
The Silk Industry in India
BY
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VOLUME II
Present Condition of
the Silk Trade of India
BY
E. C. ANSORGE, I.C.S.



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The following Statements and Returns have, among others, been made use of for the compilation of the Statistics contained in this report —

Sea-borne Trade

Annual Statements of the Sea-borne Trade of British India (available up to 1913-14)

Annual Statements of the Sea-borne Trade and Navigation of Bombay (available to 1914-15) Include coastwise Trade

Annual Statements of the Sea-borne Trade and Navigation of Bengal (available to 1914-15)

Annual Statements of the Sea-borne Trade and Navigation of Madras (available to 1914-15)

Annual Statements of the Sea-borne Trade and Navigation of Sind (available to 1914-15)

Annual Statements of the Sea-borne Trade and Navigation of Burma (available to 1913-14)

Annual Reviews of the Trade of India (available to 1914-15)

Annual Reports on the Maritime Trade of Sind (available to 1913-14)

Railborne Trade

Annual Accounts of Trade carried by Rail and River in India (available to 1913-14)

Reports of the Railborne Trade of Bombay (available to 1914-15)

Reports of the Railborne Trade of Madras (available to 1914-15)

Internal Land Trade by Rail and River of the Punjab including North-West Frontier Province (available to 1914-15)

Foreign Railborne Traffic of the Mysore State (now published quarterly—available to December 31st, 1915)

Transfrontier Trade

External Land Trade Reports of the Punjab (to 1914-15)

External Land Trade Reports of North-West Frontier Province (to 1914-15)

Transfrontier Trade Reports of Burma (to 1913-14)

Transfrontier Trade Reports of Bengal (to 1914-15)

Transfrontier Trade Reports of Assam (to 1914-15)

Census

Volumes comprising the Census Reports of India—1901 and 1911

Industrial Occupations in the Madras Presidency by A. Chatterton, C. I. E. (extracted from the Census Report of 1911)

The following have also been consulted —

Consular Reports on Silk in Lyons and St. Etienne

Geoghegan's "Silk in India," 1880

Liotard's "Memorandum on Silk in India," 1883

Watt's Dictionary of Economic Products (Vol. VI)

Provincial Monographs on Silk Fabrics (Bombay, Madras, Bengal, Punjab, etc.)

Leo Durand's "Raw Silk"

Tariff Schedules and Monthly Statements of average values of articles, from the Bombay Customs Department

I have also to acknowledge statistics supplied by—

The Director of Statistics for Imports, Exports and Re-exports of
British India

The Director of Sericulture, Kashmir State, for production of silk in
that State

The office of the Director of Agriculture Bengal, for mulberry acreage
in Bengal

The Secretary Economic Conference, Mysore State, for mulberry
acreage and Exports in Mysore

Introduction.

It was originally intended that this report should give a complete survey of the present condition of the Silk Trade in India. Circumstances have, however, rendered it impossible for me to visit several of the most important of the silk centres. Rangoon, for example, is second only to Bombay as a centre of the import trade in foreign silk, and Mandalay was, according to the census of 1911, the fifth most important district in India for silk weaving and spinning. According to the same census, Murshidabad was the largest silk weaving and spinning district in India, and Malda is still of first-class importance as a silk-producing centre. It will be seen later that the difficulty of estimating the consumption of silk in the North-West is greatly complicated by the transit of Kashmir silk through the Punjab, and accurate details of the Kashmir trade have not been forthcoming. I have unfortunately been prevented from visiting either Burma or Kashmir, and my enquiries in Bengal have been confined to the Presidency Town. The scope of this report has had consequently to be somewhat reduced, and although, after dealing with the condition of the trade in the Bombay and Madras Presidencies and in the Punjab and the North-West Frontier Province, an attempt has been made to give a general estimate of the trade of India as a whole, this last chapter is largely based upon trade statistics and reports, which it has not always been possible to check or correct by information obtained from personal enquiries. Bombay, in addition to the fact that this Presidency is from the point of view of silk weaving one of the three chief areas in India, also holds a unique position by reason of its import trade, which constitutes it by far the most important silk-distributing centre in this country. Bengal is, of course, of the first importance as having been in former years one of the great silk-producing areas of the world, and until recently by far the most important in India. Burma, as has been said above, imports more raw silk by sea than any other province except Bombay, and also carries on an extensive trade in silk across its frontiers. It is said also that silk is more commonly worn in that province than in any other except Assam. The Punjab owes its importance in this connection to the fact that it is probably the greatest consumer of foreign silk manufactures in this country. The Madras Presidency contains a considerably larger number of silk weavers than any other Presidency, Province, or State, and its continued use of Indian material and comparatively small import of foreign silk gives to this Presidency a peculiar position in an enquiry of this nature. The conditions prevailing in these various provinces differ in the extreme—in the Punjab and the North-West, for example, no Indian raw silk is to be seen—in Madras, in some places practically nothing but Mysore and Bengal silk is used. The problem to be faced throughout India, however, is the widespread adoption of foreign raw material and foreign manufactures in the place of the Indian products, and the decline of production in this country. Before such a problem can be solved it is of the utmost importance that the actual condition of the industry should be known. It is due to this consideration that details of the trade—which may at first sight appear meticulous—(such for example as the actual kinds and “chops” of raw silk in use in any centre)—have been included in this report. Before the indigenous material can replace foreign raw silk upon the looms, and before silk cloth woven in India can replace foreign manufactures in the markets, they must be supplied of the kind and quality which is most in demand. The nature of this demand differs all over India, and it is therefore indispensable that it should be clearly understood before the Indian material can be supplied in a form which will satisfy the market. The first thing is to discover the exact nature of the demand in any particular market, and the second is to supply that demand as cheaply as possible. This is undoubtedly the procedure of the Japanese merchant, and it may seem an obvious one, but it is a fact that it is not the one commonly followed in this country. New markets and a new demand can, of course, be created in certain circumstances are favourable, but where old markets are to be preserved

importance to study their exact nature before attempting to compete with the goods which are actually in favour. Theories founded upon generalisations may frequently go wrong. In Mysore State there is, I believe, a proposal under consideration that Italian methods of reeling should be introduced, and the reeling of cocoons to a fine denier carried on in a State Filature on a large scale. In order to supply a European market with Mysore silk this might be perhaps a sound proposition —about that I do not venture to express an opinion. The present chief market for Mysore silk is, however, the Madras Presidency, and, as will appear from the facts stated in the body of this report, the finer reeling of Mysore silk is generally speaking not required. At least it may be conceded that the matter is not one which can be settled in any other way than by deciding what market it is intended to supply and what is actually the demand in that particular market. An attempt to supply, so far as possible, information of this nature, has been made in the present report.

CHAPTER I.

The Silk Trade of Bombay.

1 Bombay receives about 80 per cent of the total imports of silk goods into India. The following table will show the amount of raw and manufactured silk imported into India in 1913-14 by sea and its distribution among the various importing provinces —

Sea-borne Trade	Rs
<i>Imports 1913-14—</i>	
Bombay	3,23,84,265
Burma	86,52,705
Bengal	13,69,920
Sind	6,60,090
Madras	6,50,985
TOTAL OF INDIA IMPORTS	4 37,18,565

In 1914-15 the total Sea-borne import trade of the Presidency fell to Rs 2,57,01,712. These figures include silk of all kinds,—raw, waste, yarns and warps and piece-goods. In addition to this amount, the Presidency received, according to the official figures, raw silk to the value of Rs 49,84,826 and silk piece-goods to the value of Rs 32,985 by rail, and Rs 31,896 worth by coast-wise trade. Bombay being the emporium for the distribution of silk a considerable amount of Sea-borne imports are re-exported from Bombay Port. In 1914-15 these re-exports were valued at Rs 5,94,107. Exports from Bombay—by sea, rail and coastwise—amounted to Rs 30,97,704. A balance-sheet for the Bombay Presidency may therefore be struck thus —

Balance sheet of Bombay Trade in silk during 1914-15

	IMPORTS			EXPORTS		
	Raw (including yarn, noils and warps)	Manufactured	TOTAL	Raw	Manufactured	TOTAL
	Rs	Rs	Rs	Rs	Rs	Rs
Sea-borne	1,33,23,042	1,23,78,670	2,57,01,712	1,07,408	6,71,842	7,79,310
Railborne	49,84,826	32,985	50,17,811	19,91,184	4,34,512	24,25,696
Coastwise	8,015	23,281	31,896	3,34,016	1,52,780	4,86,805
TOTAL	1,83,16,483	1,24,34,936	3,07,51,419	24,32,668	12,59,143	36,91,811
Deduct Exports	24,32,668	12,59,143	36,91,811			
Net Import	1,58,83,815	1,11,75,793	2,70,59,608			

From this table it would appear that by far the greater portion of the imported silk is consumed in Bombay itself, and from the appended balance-sheets of Bombay Port and Bombay Presidency it might be assumed that the

major portion of the imported raw silk, at least, is absorbed by Bombay Port Town.

Balance sheet of Bombay Port trade in raw silk (excluding yarn, noils and warps) during 1914-15

		Imports	Exports.
<i>Sea borne.</i>		lbs.	lbs.
Foreign silk	.	2,047,330	12,943
Cocoons and waste		130,252	40,017
<i>Coastwise.</i>			
Foreign silk		1,537	81,306
<i>By Rail</i>			
Foreign silk	{ Within Presidency	3,856	548,000
	{ From other Presidencies	37,042½	308,070
Indian silk	{ Within Presidency	25,905	21,180
	{ From other Presidencies	605,797½*	4,246
TOTAL		2,851,729	1,106,752
Deduct Exports		1,106,752	
Net Import		1,744,977	

Balance sheet of Bombay Presidency Trade in raw silk during 1914-15

		Imports	Exports.
		lbs.	lbs.
Coastwise	{ Foreign silk	450	Nil
	{ Indian silk	290	4,424
By Rail Indian	{ From Bombay Port	21,180	25,905
	{ , other Presidencies	9,082½	5,445
Foreign	{ From Bombay Port	548,000	3,856
	{ „ other Presidencies	Nil	247½
TOTAL		579,002½	39,877½
Deduct Exports		39,877½	
Net Import		540,025	

2 If these tables, compiled from the official returns, could be trusted implicitly, we should have to account for an enormous consumption of silk of all kinds by Bombay Port Town. The figures are, however, to a certain extent illusory for the reason that the statistics for Railborne Trade are extremely deceptive. This is due to the following causes —

- (1) Goods booked as parcels by passenger trains are not apparently included in any returns. It is certain that a very considerable amount of silk is in this way transferred from one place to

* This includes 7,116 parcels (587,070 lbs.) recorded as exported from Calcutta to Bombay. This is probably a mistake made below.

another, and some silk centres undoubtedly receive and distribute most of their goods by this method. For example, according to local estimates Trichinopoly receives Rs 50,000 worth of raw silk annually from Bengal and considerable supplies from Mysore or Kollegal and in its turn exports large quantities of silk piece-goods to Madras, from which place they are distributed throughout the Presidency. The whole of this trade is carried as parcels by passenger train, the extra cost being regarded as compensated by the increased security.

- (2) The use of the Post Office as a medium for the despatch of small quantities of silk goods*. How far this factor affects the figures given above can only be a matter of conjecture, but a certain quantity of silk piece-goods is certainly sent by post from Bombay to the Punjab and North-West Frontier. Especially has this been the case recently, when, owing to the apprehension of unsettled conditions on the frontier some importers have received their goods *via* Bombay or Karachi Ports and thence by post instead of by the more risky transfrontier routes.
- (3) A certain quantity of silk manufactured goods must be taken out of Bombay Port Town by small retail-sellers—box-wallahs and the like—for sale up-country. These goods, going as personal luggage will also escape registration by the railway companies.
- (4) These figures do not include any trade by road. It may safely be assumed that this traffic must be of some magnitude where, as in the case of Poona and Bombay, a large centre of the silk trade lies close to the port town or where there is no convenient route by rail. Thus for example, in the "Foreign Railborne Traffic of Mysore State" (published by the Mysore Economic Conference) it is admitted that "the Kollegal taluk of the Coimbatore District finds an outlet for its produce by the bridge over the Cauvery at Sivasamudram, and a valuable silk traffic certainly passes this way."

From these examples it is clear that a very considerable quantity of silk is transferred from one place to another without any record of it being kept. Further, a careful study of the figures actually recorded makes it only too clear that very little reliance can be placed upon them. It will be necessary to give only a few examples of this, but the number might be increased almost indefinitely. From 1913-14 arrangements have been made by the Mysore State with the Railway Company for figures to be supplied direct at regular intervals during the year. The figures for exports and imports of silk for Mysore State in 1913-14, as published by the Mysore Economic Conference, read as follows —

	Imports Mds.	Exports Mds.
Foreign raw silk	95½	Nil
Indian raw silk	200	5,500

Below are shown the figures for the same year as given in the "Inland Trade (Rail and River borne) of India" —

	Imports Cwt	Exports Cwt
Foreign raw silk	11	122
Indian raw silk	194	2,010

These figures are so unlike as to render any comparison impossible. Nor can the figures published by the Mysore Economic Conference be taken as a correct guide to the movements of silk, and the other figures be disregarded, for according to the former, Mysore State neither imported nor exported any foreign raw silk in the year 1914-15, but did import 349 maunds of Indian raw silk. Now nothing is more certain than that some quantity of

* Also raw silk. there is a considerable movement of raw silk in parcels up to ten pounds weight in India.

Chinese raw silk is used in Mysore, whether it be obtained by passenger or by goods train, and on the other hand there is no evidence to show that so large a quantity of Indian raw silk enters the Mysore State, since the only source from which Mysore might conceivably import Indian raw silk is the Kollegal taluk of the Coimbatore District in the Madras Presidency. Similarly, as regards values, previous to 1913-14 the values assigned were Rs 553-7 a maund on raw silk exports to Madras and Rs 383-2-6 on those to Bombay. In 1913-14 the values were assigned by the authorities in Mysore, and these read at Rs 576 for foreign and Rs 600 per maund for Indian raw silk. These figures tend to show that the values arbitrarily assigned in the ordinary way are very far indeed from the actual value of the goods.

While dealing with the figures for the Railborne Trade of Mysore State, it may be observed that it has recently been discovered that all previous statistics (up to 1915) included waste along with reeled silk under the head "Indian raw," thereby causing the exports of silk to be estimated at about 50 per cent. above their real value.

To take another example of the uncertainty of the official figures, it is stated in the Railborne Trade returns that Bombay received from Calcutta in 1914-15 over 7,000 maunds of Indian raw silk, valued at over Rs 45½ lakhs. No such large consignment of Indian raw material is shown in preceding years and the only conclusion possible, if the figure is to be trusted, would be that some large silk concern in the Port Town has recently enormously increased its consumption of Bengal raw silk, for the sea-borne exports and railborne exports from Bombay Port Town show nothing to counterbalance this figure. The most careful enquiry has, however, failed to reveal any such increased consumption in the Port Town. Neither of the European Mills and none of the leading native importers in that city know anything of such a consignment, and on the other hand the chief exporting firm of Indian silk in Calcutta (Anderson, Wright and Co) know equally little on the subject. The figure must, therefore, be considered at the best as highly doubtful unless and until details are obtained as to the actual consignee of such silk, and in the meantime it means a reduction of 7,116 maunds in quantity and over Rs 45½ lakhs in value from the raw silk shown in the returns as imported by rail into Bombay during 1914-15 which (including this amount) is only given as 7,464 maunds in the official returns for that year.*

3 Since, therefore, a very large proportion of the silk carried by rail goes as parcels and not as goods and is therefore not included in the returns, and since moreover the returns themselves are open to grave suspicion, it is clear that the amount of silk both raw and manufactured actually consumed in Bombay Port Town may be taken as considerably less than appears to be indicated in the balance-sheet given above, for that town is the chief centre for the distribution of raw silk throughout India. The Madras Presidency draws most of its supplies of Chinese raw silk (of which it uses a large quantity) from Bombay Port, and therefore the amount shown in the Railborne Trade returns (*viz*, 41 mds) as exported thence to Madras Presidency in 1914-15 is certainly a considerable under-statement, the major portion of this trade being probably carried by passenger trains. No accurate estimate of the quantity of foreign raw silk actually consumed in Bombay City is available but Mr M Nissim, of David Sassoon and Co, estimates that Bombay City took about 71,400 lbs of Indian raw silk in 1914-15, to the value of about Rs 5 lakhs. This estimate is supported by the Chhoi Silk Mill Co, who put the figure at Rs 5 to 7 lakhs at the most. It may safely be assumed that a very large part of the 1,744,977 lbs (already reduced to 1,157,907 lbs if we deduct the doubtful consignment of 7,116 mds from Calcutta) shown as "net import" in the balance-sheet on page 2, is not consumed in that city at all, but is distributed among the other silk centres by passenger train. It may be interesting to insert here a similar balance-

* Further enquiry has since shown this entry of 7,116½ maunds to have been an error of registration in the Audit office concerned. "Silk—Raw—Indian" should have been "Tea—Indian."

sheet given by G Watt in the "Dictionary of the Economic Products of India" for 1888-89

Balance sheet of the Transactions with the Port Town of Bombay in raw silk during 1888-89

Imports	Quantity in lbs	Exports	Quantity in lbs.
By SEA FROM FOREIGN COUNTRIES		By SEA TO FOREIGN COUNTRIES	
Foreign Produce— Silk Waste Cocoons	1,078,932 Nil* 7,030	Re exports, Foreign Produce— Silk	109,182
By COASTWISE FROM INDIAN PROVINCES		By SEA TO FOREIGN COUNTRIES.	
Indian Produce Silk	3,102	Indian Produce— Silk Waste Cocoons	7,322 2,881 Nil
By COASTWISE FROM INDIAN PROVINCES.		By COASTWISE TO INDIAN PROVINCES	
Foreign Produce Silk	5,257	Indian Produce— Silk	11,600
By RAIL AND RIVER, ETC		By COASTWISE TO INDIAN PROVINCES.	
Indian Produce Foreign Produce	57,915 1,402	Foreign Produce— Silk	121,909
TOTAL	1,753,638	By RAIL AND RIVER, ETC	
Deduct Exports	1,119,804	Indian Produce Foreign Produce	290,070 576,840
Net Import, being amount available for local demands.	633,834	TOTAL	1,119,804

This gives a net import to the Port Town of 633,834 lbs, and though there is no reason to suppose that in this case either the figures for railborne trade are entirely trustworthy, yet this quantity is probably far nearer the actual consumption than that shown in the balance-sheet for 1914-15

A similar table from the same work for the trade of Bombay Presidency may also be inserted

Balance-sheet of the recorded Transactions with the Bombay Presidency in 1888-89

Imports.	Quantity in lbs.	Exports.	Quantity in lbs.
By Transfrontier Routes— (a) Indian (b) Foreign	Nil Nil	By Transfrontier Routes— (a) Indian (b) Foreign	Nil Nil
By Rail and River— (a) Indian (b) Foreign	205,980 225,300	By Rail and River— (a) Indian (b) Foreign	33,330 577
TOTAL	491,370	TOTAL	33,907
Deduct Exports	33,907		
Net Imports	457,463		

Comparing this table with that given on page 2 above, it will be seen that the net import in 1888-89 was 457,463 lbs and in 1914-15 540,025 lbs. In these cases again the railborne trade is probably misstated, but Dr Watt remarks "An examination of the incomplete statistics that exist regarding

* * There must be some mistake in the official returns, since a large proportion of the silk imported into Bombay from China is Waste, not Reeled Silk."

more recent years manifests the same fact, namely, that the Bombay Presidency manufactures use up about half a million pounds of raw silk of which fully one half that amount is Indian silk obtained through the Port Town. The Indian raw silk imports during 1914-15, as given in the Railborne Trade returns, will be seen from the table on page 2 to be very small—only a little over 30,000 lbs in all, rather less, in fact, than the exports of the same material. Mr Nissim, however, estimates that excluding Bombay Port Town the other towns in the Presidency took some 128,000 lbs (Rs 9 lakhs) of Indian raw silk in all. According to this estimate the consumption of Indian raw silk in Bombay Presidency is only half what it was in 1888-89, exports in the same time having (again if the figures are any guide) remained about the same. If Mr Nissim's estimate is correct, however, the total net import will be considerably larger than is shown in the balance-sheet for 1914-15, showing that the total consumption of silk in the Presidency has increased in spite of the decrease in the use of Indian raw, the amount of Chinese raw consumed being double what it was in 1888-89. As this result depends upon our acceptance of the approximate correctness of the figures for export it cannot be said to be at all a certain one, but as those figures are not very large when compared with the import trade figures there is less room for errors of importance to have crept into them.

FOREIGN RAW SILK.

4 As will be seen from the balance-sheet of Bombay Port Town (above), foreign raw silk is received by sea, rail, and coastwise. The principal source of supply is, of course, China. In the official returns China and Hongkong are shown separately for purely geographical reasons, as the latter is a British possession. This distinction will be followed here, not only for the sake of convenience, but because the distinction does in reality correspond to a real difference in the nature of the raw silk imported from these places. Hongkong is the port for Canton and Southern China, and all silk from that part of China is shipped from Hongkong and is registered in the Returns as coming from that Port. The products of the Southern China provinces are various kinds of coarse silk from multivoltine worms, whereas those of the Northern China provinces are the finer silks from the univoltine. These latter are shipped from Shanghai. Wherever therefore in the course of the following paragraphs "China" silk is mentioned as distinct from "Hongkong," the former must be taken as referring to the silk which is exported from Shanghai, or—to make a rough line of demarcation—such silk as is produced in the provinces lying north of the Yang-Tsi-Kiang River, whereas Hongkong silk includes all the produce of the southern districts, the chief of which for present purposes are Kwang-Tung (Canton) and its neighbour Kwang-si.

In 1914-15 China (exclusive of Hongkong and Macao) was responsible for 1,343,091 lbs out of the total of 2,047,339 lbs imported into Bombay by sea. Of the balance Hongkong supplied 453,535 lbs, Japan 160,935 lbs, Siam 79,842 lbs and the Straits Settlements* 9,932 lbs. In addition to these amounts Japan supplied 130,195 lbs of waste, and Hongkong and China 32 and 25 lbs respectively. The following table will make a comparison possible between the present import trade, in foreign raw silk and waste, with these countries, and that of previous years —

Average Import of foreign raw silk and waste for five years ending	From China	From Hongkong	From Japan	From Siam	From Straits Settlements
	lbs	lbs	lbs.	lbs	lbs
1909-10	771,247	631,119	79,739	38,890	71,629
1914-15	1,418,917	554,621	109,070	51,157	40,019

* It is not known whether any of this silk is produced there or is transhipped simply (H M L)

From the table it will be seen that whereas the imports from China have been nearly doubled during the last ten years, those from the Straits Settlements have very heavily decreased. Hongkong, though the amount shows some decrease, retains its position as second only to China proper in importance. The trade with Siam is subject to continual fluctuations varying during the last ten years from 57 in 1910-11 and only 1,118 lbs. in 1909-10 to 96,506 lbs. in 1912-13 and 115,903 lbs. in 1907-08. On the whole, however, it shows an upward tendency though it would be unsafe to assume that this will be permanent. The figure for Japan require further analysis. The whole or practically the whole of the imports from Japan recorded from 1905-06 to 1909-10 were waste and fuchia, and therefore the figure given above (79,739 lb.) may be taken as the average amount of waste imported from that country. In 1910-11, besides 77,612 lbs. of waste 5,121 lb. recorded as Chaharum Cochim China and Yellow Shanghai were received in Rangoon from Japan. In 1911-12 50,916 lbs. were received in all raw and waste not being distinguished. In the following year beside 104,315 lb. of waste 6 lb. of raw were imported from Japan. In 1913-14 the quantity of raw silk was 15,016 lb., besides 73,552 lbs. of waste. In 1914-15 the figure for raw and waste rose to 160,935 and 130,252 lbs. respectively. Japan therefore, while retaining and increasing her trade in waste, has during the last few years become a competitor of China and Hongkong in supplying Bombay with raw silk and has already completely ousted China from the Straits Settlements and Siam. It is true that the trade in Japan in 1914-15 may be an exceptional one, but it may, on the other hand, be a true indication of demand for Japanese raw silk in India. It is, however, doubtful whether Japan will ever compete successfully with China in supplying the particular kinds of raw silk most in demand in this country for most of the Japanese raw silk received in India, hitherto has been of very inferior quality. The only kinds of Japanese raw silk, indeed, which I have found in actual use have been a few cheap varieties of Doupion, the cheap varieties the normal prices of which are from about 400 to 600 yen as compared with 900 to 1,000 yen for the commonest kind of the Japanese filature. Considerable attempts seem to have been made recently to popularize this silk, and I am informed that one cheap variety distributed from Bombay bearing a photograph of Sir Curramjeebji Bhambhani on the label. This sold before the war at Rs. 9 per Bombay cast, the "Chicken" and "Rose" (the two most used of the Sanshu Doupion cheap variety) sold for Rs. 8-12 and Rs. 8-4 or Rs. 8-8 respectively. They are said to dye well and not to contain much waste or lose much weight in the process of bleaching, but it is also stated that they are very coarse and badly reeled worse in the latter respect than Mysore silk. Bombay agents for Japanese firms appear to have visited various silk centres in India and exhibited many varieties of such silk, and one silk merchant in Kumbakonam showed me a quantity of such sample skeins. In that town—a very large centre for silk weaving and for the distribution of raw silk throughout the Madras Presidency—this Japanese silk is said to have been largely used last year, but as it was found to be entirely unsuitable for a warp and as its price has now risen from Rs. 8-12 to Rs. 13, it is now apparently hardly used there at all. The same kind of silk (Sanshu Doupion—"Chicken" and "Rose" cheap) from Toyohashi, Japan) is used at Poona, but only in small quantities for gold thread and not for ordinary weaving. In Conjeevaram, again, another large silk weaving centre in the Madras Presidency, the mere mention of Japanese reeled silk evoked exclamations of disgust! This was because of a consignment of the same kind of silk, received from Bombay two years ago, which was said to be very coarse, very badly reeled, and generally unsatisfactory.

So long, therefore, as all the first class Japanese silk goes to America or elsewhere and only the coarsest kinds are received in this country, there is no possibility of Japanese raw silk ousting Shanghai silk from the market, for such coarse silk only supplies a restricted demand, viz., where any kind of silk, however coarse, can be used for the weft thread, and cheapness is the only consideration. Now that the price of such Japanese silk has risen so

heavily, an attempt is being made in Kumbakonam to introduce an exceedingly coarse quality of Indo-China, to supply this demand for a very cheap silk. If this attempt is successful, (as it appears to be so far owing to the cheapness of this silk, which sells at Rs 10-15 as against Rs 13 the present price of the Japanese silk), the imports of the latter are likely to decrease. Whether this happens or not it will be seen that Japan cannot at present be regarded as a competitor of Shanghai in the Indian market for raw silk.

In the supply of waste and kachra China has, until the last two years, borne a considerable share, though her consignments have in no year since 1904-05 been equal to those of Japan. Hongkong has also occasionally sent considerable amounts, and France, Italy, and other countries smaller quantities, but in 1914-15 130,195 lbs out of a total of 130,252 lbs were received from Japan.

5 Since 1910-11 the different kinds of raw silk have not been distinguished in the returns, but the figures for the years 1905-06 and 1910-11 will indicate the share borne by the principal importing countries in the supply of the more important kinds. It must be noted that as the countries which supply only occasional small quantities have been omitted from this table, the totals given in each case will not, of course, correspond with the sum of the items shown in the list, these totals have, however, been added so as to indicate the share borne by each country in the trade in each kind of silk.

Kinds of silk and chief countries whence imported		1905-06	1910-11
		lbs	lbs
<i>Chakaram Cochin China and Yellow Shanghai—</i>			
Hongkong		52,843	32,546
China		438,251	836,805
Italy			3,136
Japan			3,121
	TOTAL IMPORTS	491,262*	875,608
<i>Muthur—</i>			
China		411	2,697
Hongkong		95,191	115,311
	TOTAL IMPORTS	95,602	118,002
<i>Other kinds of China—</i>			
China		87,469	147,411
Hongkong		162,691	101,741
	TOTAL IMPORTS	250,160*	252,155
<i>Japan—</i>			
Japan		397,647	797,431
China		5,401	2,787
	TOTAL IMPORTS	403,048	800,218
<i>France—</i>			
France		61,916	81,657
<i>Italy—</i>			
Italy		11,516	
	TOTAL IMPORTS	73,432*	81,657

From this table it will be seen that while silk from China (*i.e.*, Shanghai) increased between 1905-06 and 1910-11 by more than 458,000 lbs, silk from Hongkong (*i.e.*, Canton and South China) was reduced by over 62,000 lbs. It has been said that the official records for recent years do not show the amount of the various kinds of raw silk imported into India. Such a record was, however, kept by the Bombay Customs Office for test purposes only from January 20th to September 18th, 1913.

Statement showing the total quantity and value of raw silk imported into Bombay from 20th January 1913 to 18th September 1913

Description	Quantity	Value
	lbs	Rs
<i>Bolham</i>	No imports	
<i>Indo China—</i>		
Lamchow	229	703
Manchow	1,858	13,124
Shunfa	441	1,551
Yamchow	5,658	21,620
Shantung Kath No 1	6,861	44,927
Ditto No 3	2,675	18,195
TOTAL	19,695	1,00,120
<i>Yellow Shanghai—</i>		
Hong	74,958	3,40,674
Kobun	56,020	2,37,927
Manchow	221,856	10,57,060
Meung	97,392	4,76,000
Santan	73,388	1,80,174
Sichoon	60,405	2,15,561
Nanchan	2,783	9,306
TOTAL	546,802	25,17,602
<i>Thonkoon or Dupphon Silk—</i>		
(White Shanghai)	11,856	38,356
<i>Mathow—</i>		
Dankhvala	46,696	1,84,034
Lari	21,382	47,627
TOTAL	68,078	2,31,661

From this it appears that between those dates 253,643 lbs of Panjam and 68,078 lbs of Mathow, were imported into Bombay. Assuming that the import of these silks was in the same proportion during the remaining months of the year, and comparing the figures with those given above for 1910-11, decreases are evident in the case of both of these kinds of silk, and especially in the case of panjam. These two kinds of coarse silk are the most important of the imports from Hongkong, the decrease in them explains, therefore, the decrease in the total quantity of raw silk from that port, as shown in the table on page 6. By a similar comparison of the figures a decrease becomes evident in the quantity of Siam silk imported, but a considerable increase is apparent in the other kinds of Chinese silks, a particularly heavy consignment being received of "Minchow," a yellow Shanghai silk in great demand nearly all over India for waips. 221,856 lbs valued at Rs 10½ lakhs of this kind of silk were imported into Bombay during the above mentioned period, and large quantities of other kinds of silk from Shanghai—Hoing, Kobin, Meang, Mookchand, etc., were also received. It will be convenient to give here the sources of these various kinds of raw silk, so far as I have been able to ascertain them. Minchow, Kobin, Meang, Hoing, Sichoon and Shantung are all yellow silks imported from Shanghai. Lie-laying (or kakaria) and Mookchand are white silks from the same port. Panjam, Mathow, Lacklow, and the yellow and white Kath, etc., are exported from Hongkong, though the yellow Kath is said to be actually produced in the north and only received in Canton. White silk known as Tsathie is received from both ports. Appended is a list giving the principal kinds of Chinese raw silk received in Bombay and the provinces in which they are produced, so far at least as my information goes.

SOUTHERN PROVINCES		NORTHERN PROVINCES	
Name of Silk	Producing Province	Name of Silk	Producing Province
Kath (white)	Kwang tung (Canton)	Santan or Shantung	Shantung
Lacklow		Kahing	Che kiang
Siam		Thonkoon or Duppon	
Shivlam		Tsathe	
Steam		<i>Hangchow</i>	Hu pe
Tsathe		Meang	
Panjam		Laying	
Mathow		Lie laying or kakaria	Kiang su
<i>Hanglan</i>		Mookchand	
Mahang or Saisco	Kwang si	Manchow	Sz chuen
<i>Tunchuck</i>		Sichoon	
<i>Quangshan</i>	Hunan	Lao chung	Ngan whel.]
<i>Fu-chow</i>	Fokien	Kobin	

NOTE.—The kinds of silk shown in Italics do not appear to be received in India.

By comparing this list with the statement of imports between 20th January and 18th September 1913 (page 9 above) it will be seen that very large consignments were received in Bombay from Shanghai of the produce of the northern provinces—especially Sz-chuen, Hu-pe, and Kiang-su, and it appears to be chiefly such kinds of silk that account for the heavy increases under the head 'China raw silk'. Panjam and Mathow are evidently still received in large quantities from Hongkong, but as has been said above decreases are evident in these kinds of Canton silk. The fall in the quantity of panjam imported is due to the fact that this very coarse quality of

silk is mostly sent to the Punjab, where it is used very largely by the women, especially at Peshawar, Rawalpindi, etc., as thread for embroidery. Previously the women of the house were accustomed to embroider all the garments required at the time of marriage, but now-a-days it is said that the amount of such embroidery has decreased owing to the fact that suitable ready-made articles can be obtained in the bazar of Japanese or other manufacture. It would appear, therefore, that the kinds of silk the import of which has so largely and steadily increased are the yellow and white silks from the northern provinces, and especially the favourite Minchow, of which twice as much was imported during the period of which record was kept in 1913, as of any other individual kind. During those eight months 546,802 lbs of all kinds of yellow Shanghai silk were received, the amount of white Shanghai being only 211,331 lbs, of which nearly half was of the kind known as Mookchand, from Kiang-su.

6 Hitherto we have been considering the trade of the last ten years. If we go further back, however, we shall find that the import of China silk has undergone a complete change of nature during the last half-century, which is of considerable significance to the silk industry of this country. Geoghegan, writing in 1880,* mentions the following facts. For the years 1861-62 to 1865-66 imports of China silk into Bombay averaged about 1,200,000 lbs. In 1870-71 they had risen to 2,043,631 lbs. The kind of China silk chiefly imported was "punjum"—"a very inferior sort, worth from Re 1-4 to Re 1-12 per lb." It will be seen therefore, that imports of raw silk from China into Bombay were in 1870-71 very much the same in amount as they are to-day, and were considerably larger than they were during the five years ending 1909-10. In Appendix B (Table I) is a list of the imports from China to Bombay from about the date of which Geoghegan writes until the present day. This table will show that at that time the imports were almost wholly from Hongkong,—i.e., were very largely Canton silk. The finer qualities of silk from the Treaty Ports arrived in gradually increasing quantity, but it was not until the beginning of the present century that they first out-weighed the Canton silk imports. Until then the import of panjam and mathow was normally from about one third to nearly one half of the whole import from China. Since that date imports from Shanghai have risen, until they were in 1914-15 nearly three times as great as those from Hongkong. Bearing in mind the difference between the Canton and the North China silks, and the nature of panjam and mathow, these facts can lead to only one conclusion, viz., that whereas formerly imported silk was very largely used for purposes of embroidery, only a comparatively small portion of it was used for ordinary weaving, for both mathow and panjam are too coarse to be employed for that purpose. Reference has already been made to the decline of embroidery in the Punjab and North-West Frontier Province, and this must be taken, in view of the above figures, to apply to the whole of those portions of India which used Chinese silk. In place of very coarse silk for embroidery, fine thread for weaving is now being imported in far greater quantities than hitherto. When therefore it is said that in 1870 the import of Chinese silk was very much what it is to-day, it must be remembered that in the former year a very large proportion of that silk was coarse Canton produce unfit for weaving purposes, whereas the bulk of the modern import is fine North China weaving silk. At that time such fine silk as was then imported came mostly from the Persian Gulf, and was, according to Geoghegan, in great request in Ahmedabad. Imports of Persian silk were, according to the same authority, 86,303 lbs in 1861-62, 23,000 lbs in 1865-66 and 10,000 lbs in 1866-67. By 1870-71 they had risen to 42,558 lbs. There was also an average import of 100,000 lbs from Bengal into Bombay by sea during the five years ending 1870-71. A small quantity of this together with some 300,000 lbs of China silk, was re-exported to Karachi. Both these imports have entirely ceased. Imports from Persia were in 1882-83 over 100,000 lbs in amount and nearly Rs 5 lakhs in value and Persian silk was also received in considerable quan-

* "Some Account of S. in India."

ties from Russia and Turkey in Asia. The disappearance of this kind of silk from the Indian market synchronized with the growth of the North China imports. In 1899-00 the raw silk imported from Persia amounted only to 8,463 lbs, in the following year it fell to about 4,400 lbs, and in 1901-02 to 382 lbs. Since then practically none of this kind of silk has reached Bombay. The following table will illustrate these remarks, and show the proportions in which the various kinds of silk were imported in 1876-77. It may be compared with the tables on pages 8 and 9 and will reveal the extent of the change which has taken place in India.

Imports of raw silk into Bombay in 1876-77.

Kind of silk and whence imported	lbs	Rs
<i>Floos—</i>		
From Arabia	57	456
„ China—Hongkong	983	9,068
„ „ Treaty Ports	1	18
TOTAL	1,041	9,542
<i>Chalaram and Cochin China—</i>		
From Aden	126	630
„ China—Hongkong	68,010	3,14,961
„ „ Treaty Ports	10,983	52,061
„ Straits Settlements	239	1,189
TOTAL	79,358	3,68,841
<i>Nathore—</i>		
From China—Hongkong	2,802	5,188
TOTAL	2,802	5,188
<i>Other Lands of China—</i>		
From United Kingdom	129	806
„ Egypt—Alexandria	405	2,835
„ „ Suez	12,229	77,643
„ Ceylon	1	4
„ China—Hongkong	228,414	17,44,839
„ „ Treaty Ports	10,855	77,264
TOTAL	252,033	19,03,391
<i>Panyam and Kachra—</i>		
From Egypt—Suez	1,090	4,680
„ China—Hongkong	728,395	11,06,203
„ „ Treaty Ports	19,111	30,371
„ Japan	1	1
TOTAL	748,597	11,41,255

Imports of raw silk into Bombay in 1876-77—contd

Kind of silk and whence imported.	lbs.	Rs.
<i>Persian—</i>		
From United Kingdom	16	98
„ Austria—Trieste	2,474	9,898
„ Arabia	194	776
„ Persia	36,943	1,50,851
„ Turkey in Asia—Bussorah	1,012	3,795
„ „ „ Bagdad	3,534	13,602
TOTAL	44,173	1,79,016
<i>Siam—</i>		
From China—Hongkong	278	695
„ Straits Settlements	51,174	1,11,949
TOTAL	51,452	1,12,644
<i>Other kinds—</i>		
From United Kingdom	2	35
„ Aden	327	572
TOTAL	329	607
TOTAL OF RAW SILK	1,179,785	37,20,484

MANUFACTURED SILK

7 The total import of silk yarn, noils and warps, and all kinds of manufactured silk, into British India during 1913-14 amounted in value to Rs 3,10 lakhs. In 1914-15 there was a heavy fall, owing to the outbreak of war,* the amount being only Rs 1,94 lakhs, the lowest since 1906-07. Bombay, importing about 80 per cent of the total, was naturally greatly affected by this decrease. In 1913-14 her share of the imports amounted to Rs 2,26 lakhs whereas in 1914-15 the figure only reached Rs 1,55 lakhs. Re-exports amounted to a little over Rs 5 lakhs. Adding the figures for coastwise and railborne trade the balance-sheet of the transactions of Bombay Port Town in manufactured silk during 1914-15 will read as follows —

Bombay Port Town Trade in manufactured silk, 1914-15

	Imports	Exports.
<i>Sea-borne—</i>	Rs.	Rs.
Yarns, Noils and Warps	32,10,424	10,012
Foreign Piece goods	1,23,78,670	5,16,254
Indian Piece goods		1,55,598

Bombay Port Town Trade in manufactured silk, 1914-15—contd

	Imports	Exports
<i>Consist of—</i>	Rs	Rs
Foreign Piece goods	8,432	1,44,975
<i>By Rail—</i>		
1 To other Presidencies—		
Foreign Piece goods	332	4,20,380
Indian Piece goods	32,653	4,950
2 Within the Presidency—		
Foreign Piece goods	1,11,110	6,291
Indian Piece goods	3,510	8,640
TOTAL	1,57,45,131	12,76,090
<i>Deduct Exports</i>	12,76,000	
NET IMPORTS	1,44,69,041	

A similar balance-sheet for Bombay Presidency is appended —

	Imports	Exports
<i>Consist of—</i>	Rs	Rs.
Indian Piece goods	14,849	7,814
<i>By Rail—</i>		
1 Other Presidencies—		
Foreign Piece goods		182
2 With Bombay Port—		
Foreign Piece goods	6,291	1,11,110
Indian Piece goods	8,640	3,510
TOTAL	19,780	1,22,616
<i>Deduct Imports</i>		19,780
NET EXPORTS		1,02,836

Bombay Port, therefore, makes a net export of Indian piece-goods to the value of over Rs 1,30,000, but is left with a very heavy net import of foreign manufactures. With regard to the latter, however, very considerable allowance must be made for goods despatched by post and by passenger train as parcels, the bulk of this apparent net import being probably accounted for in this way. The Presidency shows a net export of about Rs 1,05,000 value in foreign manufactures. Reference to the table for transactions in raw silk on page 2 will show that during the same year it imported about 544,000 lbs of foreign raw silk. The case of Indian silk raises a difficulty, for in spite of the fact that Bombay produces no silk at all, the tables show a net export of a little under 5,000 lbs of Indian raw silk (*vide* table on page 2). The

appended table for the year 1913-14 will, however, explain this apparent anomaly, since in that year the Bombay Presidency was left with a net import of 17,800 lbs of Indian raw silk, of which a part may have been re-exported in 1914-15

Balance-sheet of transactions of Bombay Presidency in 1913-14

	INDIAN RAW SILK.		INDIAN PIECE GOODS.	
	Imports	Exports.	Imports	Exports.
	lbs	lbs	Rs.	Rs.
<i>Coastwise</i>	112	3,112	8,471	1,209
<i>By Rail—</i>				
Other Presidencies	4,907	5,650	3,798	5,598
Bombay Port	74,100	52,554	31,266	
TOTAL	79,119	61,316	43,535	6,807
<i>Deduct Exports</i>	61,316		6,807	
NET IMPORTS	17,803		36,728	

The net imports of Indian silk manufactures were in 1914-15 over Rs 12,000 in value, and in 1913-14 over Rs 36,700. The Presidency does not appear, therefore, to manufacture sufficient Indian raw material into cloth to satisfy its own demand, but is forced to import also from other sources.

During the last ten years there has been a very marked increase in the quantity of manufactured silk goods imported into Bombay, as will be seen from the following table —

Import of silk manufactures into Bombay by sea

Year	Value in Rs
1905-06	1,39,28,751
1906-07	1,23,87,274
1907-08	1,42,89,336
1908-09	1,48,36,763
1909-10	1,58,37,129
1910-11	2,03,75,850
1911-12	1,92,85,775
1912-13	2,14,24,019
1913-14	2,26,05,930
1914-15	1,55,89,094

The fall in 1914-15 is obviously chiefly due to the war. The decrease was most evident in the case of mixed goods of silk and cotton, which come mainly from Europe and which fell by Rs 34 lakhs. Piece-goods fell by Rs 26 lakhs, and yarns, noils and warps by nearly Rs 10 lakhs. Otherwise the increase has been steady, and is especially marked between 1909-10 and 1910-11 when it amounted to Rs 45 lakhs. Piece-goods accounted for Rs 29 lakhs of this amount, mixed goods following with an increase of Rs 13 lakhs, and yarns, noils and warps with Rs 3 lakhs. The countries chiefly participating in this increase were Japan, the value of whose consignments of piece-goods rose by Rs 16 lakhs and of yarns, noils and warps by Rs 4 lakhs, France with an increase of Rs 6½ lakhs in mixed goods and Rs 6 lakhs in

piece-goods, Germany, with an addition of Rs 7½ lakhs' worth of mixed goods, Italy, with an increase of Rs 3 lakhs in mixed goods and Rs 2 lakhs in yarns, etc., and China (excluding Hongkong), which increased its supplies of piece-goods by Rs 4 lakhs. Hongkong and the United Kingdom also showed increases of Rs 2 lakhs each. On the other hand, Belgium's mixed goods fell off by Rs 4 lakhs, Egypt showed a decrease of Rs 3 lakhs, and Austria-Hungary of Rs 1 lakh. Japan was therefore responsible for nearly one half of the increase. Further details of imported foreign manufactures will be found under their appropriate headings.

The enormous rise in importance of this trade during the last forty years is illustrated by the following figures —

In 1872-73 the total value was under Rs 25 lakhs. In 1873-74 it rose to Rs 27 lakhs and in the two succeeding years to Rs 31½ and Rs 31¾ respectively, falling in 1876-77 to less than Rs 21¼ lakhs. Practically the whole import was in silk piece-goods, only from Rs ¾ lakhs to Rs 1½ lakhs being mixed goods and other kinds of silk. The principal source of supply was in 1876-77 Hongkong, which accounted for Rs 13 lakhs out of a total of Rs 20 lakhs worth of piece goods. Italy sent piece-goods valued at about Rs 2½ lakhs, France Rs 1½ lakhs and the United Kingdom Rs 1 lakh, and imports from Persia were valued at above Rs ½ lakh. Mixed goods reached rather less than Rs 1½ lakhs of which the United Kingdom supplied nearly two-thirds, and Italy most of the remainder. When we compare these figures with those for 1913-14, when the imports amounted to Rs 2,26 lakhs, it will be seen how greatly the demand for silk goods of foreign manufacture has increased in British India.

Forcian manufactures — Silk yarn, noils and warps

5. Practically the whole of the import trade in these articles passes through Bombay Port, the share borne by the other Indian ports being less than a tenth of the whole. It will be convenient therefore to treat of the whole import trade in such articles into India in this place. Yarns, noils and warps have been separately enumerated in the Sea-borne Trade Returns since 1905, and the following table gives the quantity and value of the imports of such articles since that year —

Import into British India of silk yarn, noils and warps

Year	Quantity in lbs	Value in Rs
1905 06	1,066,909	30,74,550
1906 07	670,616	27,81,358
1907 08	395,723	22,70,273
1908 09	840,250	38,66,884
1909 10	876,173	36,75,540
1910 11	923,315	40,63,365
1911 12	942,738	41,83,770
1912 13	1,143,915	40,93,905
1913 14	1,167,529	45,81,705

From this table it will be seen that imports have steadily increased in recent years.

The most noticeable feature of this import trade is the rapid increase in the quantity received from Japan. In 1905-06 the value of its goods imported into Bombay was Rs 60,739 out of a total import of nearly Rs 3 lakhs. In 1913-14 it supplied goods to the value of Rs 2½ lakhs out of a total of Rs 2,26 lakhs.

lakhs The following table shows the principal importing countries and the value of the goods imported by each into Bombay —

Import of Yarn, Nools and Warps in the year	From United Kingdom	From Italy	From Austria Hungary	From Egypt	From China.	From Japan
	Rs	Rs	Rs	Rs	Rs	Rs
1914-15	1,98,466	3,59,897	3,298		1 50,723	24,75,624
1913 14	2,80,679	11,01,241	2,565		2,62,501	25,09,511
1909 10	5,66,333	12,49,457	1,42,703	2,51,280	3,01,879	9,91,589
1905 06	5,71,093	18,00,639	10,68,773	3,64,923		60,739

From this table it will be clear how largely Japan has captured this market and how little the war has affected her supply, in spite of a fall from Rs 41 $\frac{3}{4}$ lakhs to Rs 32 lakhs in the total amount imported into Bombay in 1914-15. The supply from Italy was already steadily diminishing, and in 1914-15 it fell from Rs 11 lakhs to Rs 3 $\frac{1}{4}$ lakhs. The decrease in the case of China and the United Kingdom is also noteworthy. Imports from France also have fallen greatly during the last two or three years. The large and increasing demand for spun silk is explained by the fact that it is supplied in warps and skeins ready prepared. Large quantities of Japanese spun-silk yarn and warps find their way from Bombay Port to the Bombay Presidency and to the Punjab, and the yarn is also used in the Madanpura quarter of Benares city. In the Bombay Presidency the yarn of the Fujigasu Spinning Co is used at Poona for the weft thread on a warp of Chinese silk. In Ahmedabad the use of such silk is said to have greatly increased of recent years, the quantity of reeled silk having decreased. In that city the Vijay Weaving Works (employing 21 fly-shuttle looms) uses, besides mercerised cotton, a certain quantity of Japanese spun-silk yarn (from the Kanegafuchi Spinning Co) which is said to cost Rs 6 per lb (of 39 tolas), for the production of plain suitings, for which the demand is said to be greater than the supply, owing to the difficulty of getting labour and to the high price of the yarn. In Surat both the Kanegafuchi and the Fujigasu silks (both yarn and warps) are in use, the chief importer being not a silk merchant but a general store-keeper. Here a spun-silk warp is combined with a mercerised cotton or spun-silk weft, and one weaving-master combines a thread of spun-silk with two of Chinese silk (Meang) for a warp, using Chinese silk (Minchow) for the weft. The woven cloth is exported to Burma. Most of the silk which is sent to the Punjab goes first to Amritsar, from which centre it is distributed to Multan, Ludhiana, Peshawar, etc. Spun silk from the Fujigasu Co is found in Amritsar and Multan, but only Swiss spun silk appears to be in use at Peshawar. The price of the Japanese article is said to be Rs 60 for 5 $\frac{1}{2}$ seers in Amritsar and it is used for manufacturing chaddars and turbans or for suitings. The Kashmir Weaving Co, Amritsar, formerly made use of Japanese spun-silk yarn, but their agents in Bombay are now sending them another kind which bears only the label of the Bombay firm of agents. It is, however, from the David Sassoon Alliance Mill in Bombay. It is supplied in the same count as the Japanese article (140/2 metric) and appears entirely to satisfy the recipients. This Mill, I understand, mostly spins yarns of counts 140/2 and 210/2, and very rarely of any other count. The price is, in Bombay, Rs 4 to Rs 4.2 per lb, whereas that of the Shanghai-spun yarn of the same count and denomination is Rs 4.8 per lb, and of the Japan-spun yarn, again of the same count and denomination, Rs 4.6 per lb. It should therefore be only a matter of advertising the Bombay Mills' article sufficiently in the Indian market to achieve the substitution of this article on the looms for the Japanese goods so commonly in use in the Punjab.

In Multan there is a considerable demand for spun silk, which is either combined with cotton, or is used for a warp with a weft of Bokhara or

Chinese (Hoing) silk, the latter kind of cloth selling for Re. 1-6 to Rs 2 a yard. In the Madras Presidency spun silk was given a trial a few years ago, and appears to have been generally rejected on the ground that it would not take dyes well. This seems to have been the experience of the merchants of most of the largest silk centres in the Presidency, such as Conjeeveram, Salem, Trichinopoly and Kumbakonam. At the last-mentioned place, however, one of the principal importers speaks of obtaining further supplies of it, owing to the high price of reeled silks at present. The only important centre of the Madras Presidency which still seems to use spun silk in any quantity is Madura, and even there only a small percentage of the total quantity of silk used is spun, and it is admitted that the dyes—which are aniline only—are not fast upon this kind of silk. In this place only Milan warps appear to be used, so that apparently no Japanese-spun silk, or at any rate only a negligible quantity, is used in this Presidency. The average yearly value of these articles imported into Madras was from 1905-06 to 1909-10 a little under Rs 7,000, and from 1910-11 to 1914-15 a little over the same amount. The import rose, however, in 1912-13 and 1913-14 to Rs 16,746 and Rs 13,279 respectively, owing to consignments from Japan which first arrived in those years. Previous to 1910-11 the principal exporting country was, after the United Kingdom, Austria-Hungary (Free Ports) and in 1905-06 Italy. In 1912-13, 1913-14 and 1914-15 the value of the Japanese consignments was Rs 9,450, Rs 5,200 and Rs 5,200 respectively, the value of the imports from the United Kingdom in the same years being Rs 6,646, Rs 7,657 and Rs 839 respectively, these two countries dividing between them the total import. The Japanese consignments to this Presidency may, however, be regarded as in the nature of samples, and the comparatively large imports of the years 1912-13 and 1913-14 are not likely to be equalled in the near future unless spun silk is adopted much more extensively than at present owing to the high prices ruling for reeled silks.*

Spun silk from Switzerland is used in the Punjab and is said to cost Rs 10 a seer dyed. Italian silk waste yarn ("Stag" Brand) is also used in Amritsar in smaller quantities, but does not appear to go to Peshawar, where, however, the Swiss article is used for embroidery, for the padding of gold thread and for the manufacture of *naras* or *azárbands*, a web-cloth for scarves etc., made by a rough process of knitting upon a wooden frame†. The same kind of articles, viz., *azárbands* and *parandás* (knitted hair-nets), are also made from silk waste yarn at Amritsar. A certain amount of Italian spun silk appears also to be used in the Bombay Presidency, and some is said to go to Benares. Shanghai also supplies a cheap warp, though I have not come across it in actual use. It will thus be seen how widely and for what various purposes spun silk and waste yarn is used, both on account of its comparative cheapness and on account of its convenience, since not only does it not require winding into various qualities of good or waste, as in the case of most reeled silk, but it can also be obtained ready for use in the form of a warp.

There does not appear to be any special characteristic of the Japanese brands which recommends them to the Indian buyer. All qualities, from the finest possible to the thick coarse yarn used in the Punjab for *azárbands*, etc., are supplied by Italy and as has been mentioned above, the product of the Bombay Mills appears entirely able to take the place of the Japanese goods. The only reason why the Japanese article has achieved so great a popularity (the extent of which may be judged from the import figures) appears to be the energy of the Japanese exporters, who through their agents in India have flooded the market with the right article at the right time. S. Manzato, of B. G. Gorio and Co., Bombay, ascribes the success of the Japanese over the Italian article to cheap labour in the former country, but I have not been able to compare the prices of Japanese and Italian spun silk of exactly the same quality, and without such a comparison it is impossible to judge how far this is the case. Italy, however, appears sometimes to experience a certain amount of difficulty in obtaining sufficient material, and on occasion imports consign-

* Vide note on page 36

† The process of manufacture of these articles is described and illustrated in the Punjab Monograph on the Silk Industry.

ments of waste silk from Kashmir. It is difficult to say with any certainty whether the demand for such silk in India will continue to increase. That it is doing so in the Punjab at present is beyond doubt, and it also appears to be the case in the Bombay Presidency. It is possible, however, that silk-dealers in those provinces will finally come to the same conclusion as those in the Madras Presidency and will reject it in favour of reeled silk. At present, however, the comparatively high prices ruling for reeled silks of all kinds leads to the conclusion that a still greater increase in the demand for spun silks will follow, and there is no reason to suppose that for the present any decrease is to be expected in the total quantity of this material imported into India.

Goods of silk mixed with other materials

9 Articles of this nature are supplied chiefly by France, Italy, Germany and the United Kingdom and in consequence of the war there was a very heavy fall in the amount imported last year. The figures for the last ten years show an increase in this class of goods, the average import for the five years ending 1908-09 being about Rs 30½ lakhs and that for the five years ending 1913-14 nearly Rs 38 lakhs. The value of such goods imported in that year reached over Rs 50 lakhs, but in 1914-15 it fell to less than Rs 16½ lakhs. The shares borne by the principal importing countries in 1913-14 were—Germany Rs 16½ lakhs, France Rs 14 lakhs, United Kingdom Rs 10 lakhs, and Italy Rs 7½ lakhs. All these countries have participated in the increase in recent years except France whose trade has remained on much the same level as it was in 1904-05. Hongkong, which was formerly a competitor, has dropped to comparative insignificance in the last few years. Japan has not as yet seriously contested this trade. Of the principal countries the war has affected the United Kingdom most seriously and Italy least. The imports of the former fell from Rs 10 lakhs to Rs 80 000 in value whereas those of Italy fell only from Rs 7½ to Rs 4 lakhs. Germany's imports fell from Rs 16½ to Rs 3 lakhs and those of France from Rs 14½ to Rs 6 lakhs in value.

The demand for these articles seems to be greatest in the Bombay Presidency and the Punjab. There must be a considerable export of this nature from Bombay Port to Amritsar and Delhi where they are sold in large quantities. They include silk flowered grenadines from Switzerland, cotton and silk goods of various kinds from France and imitation silk saris from Austria-Hungary, these being of cotton embroidered with silk and imitation gold thread. Details of these articles will be given later when we come to deal with the Punjab import of manufactured silk. German mixed velvets and satin were also imported in large quantities until the outbreak of the war. Mr Ghamat of the Bombay Customs Department has kindly collected a number of samples of these and forwarded them to me. The satins are of all kinds—plain or self-coloured, corded satin, brocade, satin embroidered with silk spots and flowers, and figured satin brocade similarly embroidered, varying in price from about 8½d. to 1s 3¾d. per yard. They are sold in lengths of 32-3 yards or 35-6 yards, the widths varying from 16½ to 24 inches. They all agree, however, in the brilliance of their dyes, the hideousness of their colour-effects and the cheapness and flimsiness of their material. The velvets are apparently of cotton or cotton-backed silk and are supplied in lengths of 25 to 30 yards. The former cost 11½d. to 13d. per yard in width of 18 inches; the latter vary from 1s 4½d. to 1s 8d. per yard, the widths being 17½ to 18 inches. There is a very wide range of colours—blue, purple, cerise, green, bottle-green, chocolate, light and dark violet, scarlet, light and dark, black, jet-black and gold. The ingenuity shown in preparing the sample boxes of these velvets is especially noteworthy, the goods being set out in the most striking possible way. I do not know of any reason why all these articles should not be manufactured in India if a market continues for such inferior goods. In the Punjab to which these articles largely go, the popular taste appears to subordinate durability and quality to brilliance of colouring and cheapness, and it certainly ought to be possible

to supply what is needed within the country. It would, no doubt, be a misfortune for skilled silk weavers to turn their hands to the manufacture of shoddy articles of this kind, but it should be possible to set up the industry side by side with the existing weaving, especially in places where silk-weaving has already disappeared or is dying out, (as, for example, in Ahmednagar), and where weavers are still available though they have been driven to take up other occupations.

Silk piece-goods.

10 The total import of pure silk goods into Bombay in 1914-15 was valued at Rs 1,06 lakhs showing a decrease of over Rs 26 lakhs from the preceding year. As the Eastern countries supply well over 90 per cent of the whole amount the fall cannot wholly be ascribed to the war, and it should probably be partly referred to the growing competition of mercerised cotton goods in the market. A decrease was already apparent in 1913-14, though this chiefly affected not the Bombay but the Burma market, which in the case of goods of this description receives about 30 per cent of the total import into India. Until that year, however, imports during the last ten years have shown a fairly steady increase, the value having risen from Rs 69 lakhs in 1902-03 to Rs 1,34 lakhs in 1912-13. The following table gives the total value of silk piece-goods imported into Bombay during various years, and the share borne by the chief importing countries, for comparison —

	From Japan In Rs lakhs	From China In Rs lakhs	From Hong Kong In Rs lakhs	From France In Rs lakhs	Total Import In Rs lakhs
During 1902-03	17½	20	14	13	69
Average for five years 1907-08	9	20	15	5½	73
Average for five years 1912-13	55	20	18½	7	113
During 1912-13	143	35	22½	7	132½
During 1914-15	46	31½	23	3	106

It will be seen that French goods, after losing their original position in the market ten years ago, have since then remained fairly steady until last year. The other three countries have all had some share in supplying the increased demand, but Japanese articles now amount to nearly one half of the total import of pure silk goods. The success of the Japanese goods seems to be due, more than anything else, to the aptitude shown by that country in fitting the supply exactly to the demand, as in the case of silk yarns and warps, and to the variety of the articles which it puts upon the market. It is said that Japanese agents visit the merchants in Bombay, and other of the chief silk centres of India, every few months and enquire into the exact nature of the demand, the particular type of silk cloth most readily sold, and even the particular patterns most suited to the public taste. The style and quality of the *saris* and other articles of clothing most in fashion is carefully observed, and fresh patterns adapted to the popular taste of the moment are regularly exported to India. Where other countries monopolise the markets with goods of a particular description, no time is lost in manufacturing and putting upon the market articles of the same or similar nature and pattern. Ten years ago all the flowered silk (*kohaku*) imported into India came from France. Now the whole supply comes from Japan. The same is true of damask. Some white embossed satin, for which there is not so great a demand, still comes from France, but it is said to cost nearly 50 per cent more than the Japanese article. The following list of the different kinds of silk piece-goods imported from Japan into Bombay will give some idea of the extent and variety of the trade — *gauze* (flowered, chicken, plain, khaka, satin pati, chokhi), *pag* (plain, flowered, chicken, doria, duranga, painted, rainbow), *crepe* (plain, chicken, khaka, painted), *kanavez* (roll, plain,

duranga, chokdi, satin patī, watered, gold-embroidered), *pinappala* (plain, satin patī, chokdi, rainbow, chataī, chicken).

With this list may be compared the following list of silk articles imported from China — *gatpot* (plain and flowered), *gauze* (plain and flowered), *atlas*, *crepe*, *paj* (plain and flowered), *hoziua*, *lustin*, and *satin* (all plain and flowered), *satin mashru* (striped and five striped), *tanchor*, *izar*, *borders*, *saris-golas*—(i.e., bordered saris), and *dupetas* (generally of paj), besides cheap piece-goods of wild silk

For *paj* in particular, both plain and flowered, there is a large market. This is also produced by the Bombay Mills, but the general complaint is made that the Mills work on conservative lines and are much less ready than the Japanese to bring out new patterns. They are consequently less able to supply the market with the particular patterns and kinds of silk cloth most in demand at the moment.

The extent to which Japan has captured the trade in these articles is instanced by the fact that the goods of that country have retained their position in the market, in spite of the price having gone up from 25 per cent to 75 per cent owing to the war. The silk trade appears to be the barometer of financial prosperity in the United States of America, and at the present time her demand for Japanese goods has so enormously increased that prices have risen very high, yet none the less Japanese silk piece-goods far outnumbered those of any other country in the Indian market during 1914-15.

The superior method and organization of the Japanese trade is shown not only in such important matters as the adaptation of supply to demand but also in the attention paid to the smallest details of good management. For example, all the silk goods from Japan arrive at Bombay Port carefully packed in tin-lined cases. This is not the case with any of the Shanghai or other Chinese silk manufactures. Similarly, all heavy Japanese silks bear a Government stamp giving the weight of the article, revealing more careful supervision than is elsewhere provided.

I cannot venture any opinion as to how far this organization is the result of private enterprise, and how far it is due to Government intervention, but there can be no doubt whatsoever that the trade in Indian silk goods cannot hope, without organization, to compete with the highly organized trade of Japan. Whether, so organized, it can compete with any success, will depend upon the industrial conditions prevailing in these two countries. The success of the Japanese goods is sometimes referred to the cheaper and more efficient labour which is said to be available in that country, but there is no clear evidence that labour in India, similarly organized, could not be as efficient as that of Japan. Nor would such a condition by any means explain the greater diversity and variety of Japanese goods, and the frequent failure in this country to supply the public with what it needs. The demand prevailing in North-West India for finely-woven and highly-finished silk piece-goods has been met, almost entirely, from outside, through imports from Japan and China, the supply received from Benares or the Bombay Mills being comparatively very small, and that obtained from the local looms almost negligible. It is, of course, possible that superior organization is not the root cause of the Japanese success, but only a contributory factor, the fundamental reason lying in the difference of conditions of labour in the two countries. This would be the case if the Japanese labourer is compelled by circumstances to work in the silk industry at a lower wage, when the Indian labourer is able to employ himself more profitably in other industries. Whether this is so or not is a question which can only be answered by a study on the spot of the conditions prevailing in Japan. If it should be found to be the case it is obvious that although organization must always be beneficial, success in this particular industry must rest with the country which is able to put its goods on the market at the lowest price. Sentimental considerations will certainly not go very far in persuading an intending customer to pay more for an article which he might obtain at a lower price. In this connection I may be allowed to quote Mr. Cumming's "Review of the Industrial Position and Prospects in Bengal in 1908" — "At a time when so much is said and written about the

support of local industries, Bengali ladies of the better class are purchasing *saris* of Chinese silk manufactured in Japan and sold in Calcutta in preference to the Calcutta or the Benares products. This is not only true of Bengal,—and indeed I see no reason why the case should be otherwise, or why Japan should not enjoy the fruits of its superior industry and initiative, if these are the causes of its success. Unless, however, conditions of labour are so different in this country as to preclude successful competition, there is no reason why an effort should not be made, by means of sound organization, to put to their full use the natural resources of this country, which in the case of silk are very considerable.

Other silk manufactures and silk substitutes

11 Other articles of silk manufacture are of small importance. They include thread for sewing, and amounted in value to Rs 1,02,765 in 1914-15. The United Kingdom, Japan and Germany are the principal exporting countries, supplying about 50 per cent, 20 per cent and 16 per cent respectively in 1913-14, though last year German goods amounted only to about 4 per cent of the whole, Japanese goods rising to about 30 per cent. Besides silk goods, however, mention must be made of mercerised cotton yarn, and piece-goods of cotton and artificial silk. These articles have only been separately recorded in the returns since last year and it is, therefore, not possible to compare the amounts imported previously. They are now of considerable importance, imports of mercerised cotton into Bombay amounting in 1914-15 to 1,530,324 lbs, valued at Rs 23,42,741, and of goods of cotton and artificial silk to a value of Rs 3,47,877. It may be mentioned here that artificial silk is also frequently used for the embroidery on Japanese piece-goods, sold as pure silk. This is an abuse all the more difficult to check in that petty dealers in this country are very frequently ignorant as to what is, and what is not real silk. Thus for example spun silk is often regarded as no more real silk than artificial silk or even mercerised cotton, and would certainly be classed with those articles, by many such dealers, as a silk substitute. It would be a decided check upon a deception which trades upon this ignorance if it were possible for all pure silk articles, whether of spun or of reeled silk, to be stamped as such at the time of clearing the goods at the Customs. Articles of cotton and artificial silk are, of course, acknowledged as such, and are so recorded in the returns. They come mostly from England, only about 3 per cent of the total import being received from other countries. Imports into Karachi of the same kind of goods amounted in value to Rs 15,884 almost entirely from the United Kingdom.

None of these importers have ordinarily any direct dealings with the silk merchants in the mofussil. The latter instruct their agents to buy silk on order through the brokers, of whom there are said to be about a dozen in Bombay, two or three of them conducting most of the business. The more businesslike of the mofussil merchants receive intimations from time to time of the latest shipments of silk and the kinds received, their qualities and prices. The agents in Bombay nearly always buy on commission and very rarely on their own risk. The brokers are said to get $\frac{1}{4}$ per cent commission on their purchases from the importing firms. The agents probably obtain about 1 per cent commission, but reliable information on this head is difficult to obtain. The mofussil merchants are sometimes only dealers in silk, importing from Bombay in the manner described, and selling the raw material to the actual employers of weavers, who are smaller merchants in the town. Sometimes, however, they prepare the silk for weaving, employing winders, dyers, throwsters and pirn-winders, and selling the raw silk ready-prepared for the loom. Elsewhere these processes are left to the actual employers of the weavers. Sometimes, again, the mofussil importers are themselves the employers of the weavers, keeping a number of looms at work in the nature of a small factory. Details of these various methods will be found elsewhere, the practice varying from province to province and even from town to town. The disadvantages of a system which leaves the import trade in raw material destined to supply a very large area in the hands of an inconsiderable number of individuals are obvious. In some places, where the influence of a single importer, who is interested in a particular commodity, is paramount, those who are actually concerned in the silk industry are liable to be unable to obtain anything but that particular commodity, though it may cease to be the article which is most suitable for their purposes. This particularly affects the Indian raw material, for whereas the Japanese and Chinese goods are the particular concern of several important firms, very little interest is now taken in pushing the Indian goods on the market. In many places Mysore raw silk is totally unknown, and in others the quality and quantity of Bengal silk required cannot easily be obtained. Were there any organization, conducted on strictly business lines, for the better advertising of all kinds of Indian raw silk, it is fairly certain that a number of markets could be supplied which at present are ignorant of, or cannot obtain such material, although it is at least as suitable for their purposes as the kinds of foreign raw silk now being imported.

Internal Trade

13 Besides the imports of foreign silk by sea Bombay received in 1914-15 1,987 lbs of foreign raw silk by coasting vessels and 449 maunds by rail. Of the coastwise import 1,137 lbs came from Kathiawar, and the remainder was shared about equally between Burma and the other British Ports within the Bombay Presidency. Nearly the whole of the import by rail is recorded as having been received from Mysore. As has been seen from the table given above Bombay received during that year, according to the official returns, raw silk, foreign and Indian, to the value of nearly Rs 4½ lakhs,* and manufactures valued at about Rs 33,000 by rail, and nearly Rs 32,000 by coasting vessels. The principal sources of supply were Mysore which is recorded as having sent 440 maunds of foreign and 109 maunds of Indian raw silk of a total value of over Rs 2 lakhs and Madras, which was responsible for Indian raw silk to the value of Rs 1¾ lakhs. The large import of foreign raw silk from Mysore is inexplicable, for a similar though smaller import (61 maunds) is recorded in the preceding year (1913-14), in spite of the fact that Mysore imported (according to the official returns) less than 80 maunds of such silk during the five years ending 1913-14. Unless therefore that State receives large supplies of foreign raw silk by road from neighbouring territory and again exports them (which is extremely unlikely), there appears to be a serious mistake in the official returns.

* Excluding the supposed consignment from Calcutta referred to on page 4

Outside the Bombay Presidency by far the largest consumer of foreign raw silk is the Punjab. The total import of such silk into Bombay Port amounted last year to over 2 million lbs, after deduction of exports. Of this quantity rather over $\frac{1}{2}$ million lbs are recorded as having been exported by rail to places within the Presidency, and rather under $\frac{1}{2}$ million lbs to other Presidencies. Bombay Port Town, therefore, is left with a net import for its own consumption of about half the total import—or 1 million lbs. This figure is however subject to very large deductions for the reasons given on page 2 above, large quantities of silk being exported by passenger train. The following table gives the amount, in maunds, of foreign raw silk imported by rail and coastwise into the undermentioned provinces from the Bombay Presidency, practically the whole amount being, of course, from Bombay Port —

Export of foreign raw silk from Bombay to	1914 15	1913 14	1909 10	1905 06
	Mds	Mds	Mds	Mds
Punjab (by rail)	4,292	3,920		4,113
Sind (by coast and rail)	694	1,035	956	1,284
Nizam's Territory (by rail)	196	294	185	280
United Provinces (by rail)	123	120	4,634	
Central Provinces (by rail)	103	156		104
Madras (by coast and rail)	35	40	179	3
Others (by coast and rail)	49	41	90	46
TOTAL	5,492	5,615	6,044	5,830

The ultimate destination of the large quantity recorded in 1909-10 as consigned to the United Provinces was probably the Punjab. From this table it will be seen that the imports of foreign silk into that province have remained fairly steady, and that it regularly consumes about three-quarters of the whole export from Bombay Presidency, or about one-sixth of the total quantity imported into Bombay. The remaining two-sixths are divided between Gujarat and Kathiawar on the one hand and the remaining provinces and other places within the Presidency on the other hand. From the above table it will appear that the consumption of foreign silk imported from Bombay by those provinces has to a certain extent decreased. As, however, Bombay is by far the largest but not the only port which receives supplies of foreign raw silk by sea, it is not safe to conclude that actual consumption in any province has decreased without taking into account all the sources of supply, which include inter-provincial trade by rail. These figures will be given in their appropriate places. Attention need only be drawn here to the fact that whereas the total import of the raw material into Bombay Port has increased in recent years, exports from the Port to other provinces, re-exports by sea, and exports to other places in the Presidency, have all, according to the Trade Returns, decreased. The conclusion that the Port Town is now absorbing a very greatly increased quantity of the raw material itself, which more than counterbalances the decreases in other centres, is not a feasible one, for there is no other evidence of such an enormous increase in consumption. On the other hand, it is beyond question that the use of foreign raw silk in the Madras Presidency has greatly increased and that Presidency draws its supplies very largely from Bombay. As has been shown in the table above the recorded export to Madras is a trivial one. The only conclusion, therefore, is that only a portion of the railborne trade is recorded in the Returns, and most of the one million lbs of foreign raw silk which appears from the official figures to have been used up in the Port Town, was really distributed among the other provinces or the remainder of the Bombay Presidency, and went partly to the silk-centres of Madras, the export being effected by passenger train or by post.

Similarly, it is probable that foreign silk manufactures are largely sent out of Bombay by the same methods, so that the recorded figures for railborne and coastwise trade in such goods cannot in this case also be taken as more than a very rough indication of their movements. The principal recipients are the Punjab and the United Provinces of Agra and Oudh by rail, and Sind by coastwise trade. A smaller quantity goes regularly also to the Nizam's Territory, and occasional consignments are obtained by the Central Provinces, Madras, and other provinces. The subjoined table shows the total quantity, in maunds, recorded as having been exported from Bombay to other provinces by rail —

Foreign piece goods exported by rail from Bombay to	1914 15	1913 14	1909 10	1905 06
	Mds	Mds	Mds	Mds
Punjab	770	1,403	1,730	1,459
United Provinces	374	364	464	244
Other provinces	100	134	102	152
TOTAL	1,244	1,901	2,296	1,855
TOTAL VALUE RS	4,29,562	6,37,739	7,88,189	6,11,236

The use of foreign silk manufactures in the Punjab appears therefore to have decreased heavily last year, the amount in use in the United Provinces having, on the other hand, remained fairly steady. Besides this quantity exported by rail, Sind receives a regular supply by coastwise trade from Bombay Port. This amounted in value to Rs 1,28,000 in 1914-15, and here again a decrease is evident, the figure reaching a little over Rs 3 lakhs in 1905-06 and over 2 lakhs in 1909-10. From these figures, if they could be considered reliable, it would appear that the general use of foreign manufactured silk is decreasing. This conclusion can hardly be drawn, however, in view of the undoubted fact that the imports of such articles into British India have heavily increased during the last few years. It is true that re-exports of such silk have also increased and rose in value from Rs 4½ lakhs in 1909-10 to Rs 10 lakhs in 1913-14, but this goes very little way in accounting for an increase which amounted to over Rs 70 lakhs, of which more than four-fifths went through Bombay Port. It appears therefore that the figures for railborne trade of recent years are very incomplete and record only a portion of the whole trade.

The trade in Indian manufactured silk is on a small scale. Bombay Port receives these articles from Calcutta, Mysore and the Punjab, and exports to the United Provinces, Central Provinces, and Nizam's Territory. The total imports in 1914-15 amounted only to about Rs ½ lakh in value, and were mainly received from Calcutta by rail and Kathiawar by coastwise trade. The total exports amounted only to about Rs 12,000 in value. In 1913-14 the Port received 100 maunds, valued at Rs 1 lakh, from Calcutta and Mysore by rail, besides a small amount by coastwise vessels, and exported 46 maunds, valued at Rs 33,000, to the Central Provinces, etc. In 1909-10 the total import (from Punjab, Mysore, etc.), was valued at nearly Rs 1½ lakhs, and the total export (to the United Provinces, Nizam's Territory, etc.), at over Rs 1 lakh. In 1905-06 the imports (from Calcutta, etc.), were only valued at about Rs 30,000, but 1,614 maunds valued at over Rs 10½ lakhs, were exported by rail, and over Rs ½ lakh's worth by coast, to the United Provinces, Punjab, Nizam's Territory, and other places. It is evident therefore that the trade in Indian manufactured silk has very seriously declined, and so far as concerns Bombay Port is now of very small importance.

14 Within the Bombay Presidency the most important movements of silk are the exports of foreign raw material from Bombay Port. These in

Indian raw material on the looms Exports from Bombay Port are generally of foreign piece-goods to the East Deccan block (Ahmednagar, Sholapur and Bijapur), while this block generally sends articles of Indian manufacture to the West Deccan (Poona and Satara) and elsewhere These latter were valued in 1914-15 at Rs 25,000 and in 1913-14 at Rs 13,770 Silk looms appear to have practically ceased to work in Ahmednagar, therefore Sholapur and Bijapur must be almost wholly responsible for this output, and it is probable that these places make greater use of Indian raw material than is the case elsewhere in the Presidency

SILK INDUSTRY

15 Apart from the official figures for recorded transactions in silk, local enquiry shows that practically no Indian raw silk is used in Surat, Ahmedabad or Poona Mr Nissim's estimate of the quantity of this material consumed in the Bombay Port Town has already been given The Chhoi Silk Mill Co Ltd, has kindly supplied the following figures, showing its own consumption of raw silk, chiefly Bengal and China, and outturn of silk cloth during the five years ending 30th June 1915 In addition to raw silk this Concern also consumes Mill Spun Silk, from silk waste, and cotton yarn

Year	Silk consumed			Silk cloth produced		
	Rs	a	p	Rs	a	p
1911	1,38,053	3	8	3,35,389	0	0
1912	78,759	7	4	3,28,058	0	10
1913	80,700	14	0	3,14,367	2	5
1914	66,194	15	0	2,62,413	0	8
1915	60,110	11	11	2,27,976	7	3
TOTAL	4,23,885	3	11	14,68,203	11	2

No indication is given of the proportion of Bengal raw silk to China raw silk so consumed Mr Nissim's estimate of the Indian raw silk consumed by the rest of the Presidency is as follows —Ahmednagar, Sholapur and Chitapur 28,000 lbs, Rs 2 lakhs —Yeola 15,000 lbs, Rs 1 lakh —Hubli, Dharwar and Bagalkote 85,700 lbs, Rs 6 lakhs Adding the estimated amount of consumption in Bombay City (*viz*, 71,400 lbs — Rs 5 lakhs), the total quantity of this material consumed in the Bombay Presidency during 1914-15 amounted to about 200,000 lbs, valued at roughly Rs 14 lakhs There is nothing to indicate the source of this silk, but it may be conjectured that Hubli and Dharwar receive supplies from Mysore *via* Harihar, by which route, according to the Returns for the Railborne Traffic of the Mysore State, 333 maunds or 27,472 lbs of Indian raw silk were exported in 1914-15 During the first three quarters of 1915-16 the export by this route was 404 maunds or 33,330 lbs of raw silk (excluding waste), an increase which very possibly means that Hubli and Dharwar are now, owing to the high price of China silk, drawing upon Mysore more heavily than was formerly the case for the supply of the Indian material Similarly, Sholapur may also receive supplies of Mysore raw silk, either *via* Harihar or *via* Hindupur The export from Mysore State by the former route is a large one, amounting to 1,400 maunds or 115,500 lbs in 1914-15, and during the first three quarters of 1915-16 to 1,709 maunds or 140,992 lbs The total export of this material from Mysore during 1914-15 by these two routes (which lead in the direction of the Bombay Presidency, the third route, Bisanatham, going towards Madras) amounted to 142,972 lbs, and in the first three quarters of 1915-16 to 174,322 lbs If Mr Nissim's estimate is correct, it is probable that this

considerably increase the price of the raw material. The real causes of the decline of the industry, however, appear to be the following —

(1) The competition of the Cotton Mills which pay their hands better

(2) The failure of the employers of the weavers to recognize the change in demand and adapt themselves to it. The decrease in demand ascribed to the failure of the monsoon two years ago is far more likely to be due to a change in the nature of that demand, for the neighbouring centre of Surat has experienced no such decrease. The merchants are very unwilling to set their looms to work upon anything except rich gold-embroidered *saris* of the kind manufactured by their fathers, the demand for which is certainly a limited, and possibly a decreasing one. Only 4 or 5 persons in the town are now able, it is alleged, to set the looms for particular patterns, and the ordinary manufacture consists of this very fine gold-embroidered silk cloth, woven in standard patterns and costing from Rs. 15 to Rs. 50 per piece of about one yard. The women of the town are however largely engaged upon the process known as *bandham* in the course of which knots are tied in the cloth, and it is then dipped in dye, sometimes more than once, patterns being produced by this method. The silk used for this is Hoing for the warp and Kakaria for the weft and the manufactured cloth sells for Rs. 16 for a piece of $4\frac{1}{2}$ yards (24 inches wide) and is used for making *saris*. This kind of work is however done solely by women who earn only Rs. 3 or 4 a month in this way, it does not therefore affect the general position of the industry in the town.

(3) The merchants themselves. There are estimated to be from 500 to 1,000 of these in the City—mostly men of small capital,—and by their lack of initiative and business capacity they are certainly contributing to the decline of the industry. In spite of the fact that it is owned that Surat turns out cheaper silk cloth than Ahmedabad, and it is recognized that the old demand is decreasing, they generally fail to make any attempt to meet the new demand. They are unable or unwilling to raise the pay of the weavers employed by them with the result that the Cotton Mills offer superior attractions and entice the weavers away from the silk-loom. It is impossible not to regard these small employers of weavers as a serious drag upon the industry as a whole, and they must inevitably present an obstacle to any attempt to revive it.

(4) The entire supply of silk seems to be in the hands of one firm, which has a branch in Shanghai and which naturally has an interest in supplying Chinese silk. It is very possible that this is partly the cause why the Indian raw material never appears to be imported into Ahmedabad.

I am convinced that the weavers, if combined together, could do far better for themselves than is possible under present conditions. The industry is at present conducted in a wasteful manner, the number of persons who are practically mere middlemen being enormous. It is a matter for regret that skilled silk-weavers should be driven to work in the Cotton Mills, and considering the success of the silk industry in Surat it can hardly be unavoidable. Were it possible to constitute the weavers of this city into a Co-operative Union, on the lines of the Conjeevaram Weavers' Union in Madras, there would, I think, be very good hope of vastly improving the conditions now prevailing in Ahmedabad.

17. In Surat, on the other hand, the industry is in a flourishing condition, though it has suffered a temporary check from the unfavourable conditions brought about by the war. The largest importer of China raw silk now imports only half the quantity which he obtained from Bombay before its outbreak, and the firm of Sorabji Hormusha Joshi and Co., which employed some 150 weavers before the war, now finds work for only about a score. This is largely because there was a large export of silk to Turkey, Jeddah and Mecca, the Ports of the Persian Gulf, and Tunis, Algiers and Morocco. "Watered Silk" (known as *garam sut*) is manufactured by this firm in considerable quantity, and 90 per cent of this kind of cloth was exported in this way to different parts of the Turkish Empire. The demand for such cloth has therefore practically failed. All the silk merchants of this town agree,

Other merchants of Surat manufacture silk cloth largely or wholly for the Burmese market, one having a branch at Rangoon Minchow and "lari" (apparently best quality Minchow) and coarse Meang are used for these manufactures. Japanese spun silk is also occasionally used. The "lari" is woven into *dhupsan* which costs Rs 7-8 for a lungi of 2 yards by 42 inches. Minchow is woven into *bepati*, lungis of 7 or 8 yards of 21 inches costing Rs 5-8. Meang is used for inferior *bepatis*. The prices of the raw silk are given as—lari Rs 17 per standard seer, Minchow Rs 14-12, Meang Rs 12-14 or Rs 12-6. Other qualities of Meang are "H K" at Rs 11-14, "C K" No 2 at Rs 12-8, and "C C" No 2 at Rs 12-2. The employers are reported to pay the weavers about Rs 16 for 50 local yards (about 2 ft 4 ins), providing the raw material and giving advances, but the rate appears to vary, for in one case the employer, himself a weaver, kept a written scale of pay varying according to the nature of the cloth, viz, Rs 7 per 54 yards by 20 inches, Rs 7-8 for 54 yards by 22 inches, Rs 6-12 for 54 yards by 18 inches, and so on. Owing to the diversity of the widths of cloth manufactured in Surat, therefore, statements as to the amount of pay received by the weavers have to be accepted with caution. The fact that there does not seem to be the same lack of labour which is being experienced in Ahmedabad, however, makes it probable that the weavers' earnings are higher in Surat than in that town. One merchant is said to buy finished cloth direct from the weavers themselves, who provide their own materials. The cloth is sent to Poona, where this merchant has a shop. This method certainly appears to be more likely to conduce to the prosperity of the weavers, supposing that they are able to obtain their raw silk without incurring large debts which is unlikely and also supposing that they receive the full price for their cloth, which (to judge from the practice elsewhere) is equally unlikely. It may be doubted whether, without combination, the weavers will ever be able to obtain the full profit of their labour under such a system.

Other kinds of silk manufactures in Surat—cloth woven of silk threads mixed with threads of mercerised cotton, etc,—have been mentioned elsewhere. Enough has been said to show the diversity of the manufactured articles and the wide range of markets which they are designed to supply. Under the circumstances it is not at all surprising that whereas the silk industry of Surat was at least until the outbreak of war, in a very prosperous condition, that of Ahmedabad appears to have fallen into a steady decline. The latter city already depends largely on imports of foreign manufactures. Japanese goods, in particular are greatly in demand. Some of these are made in Japan, but dyed and finished in France before export to India. Others are dyed in Bombay or in Surat. Cloth from the Bombay Mills is also sold but the Japanese articles are preferred, in spite of the cheapness of the Mills cloth. Various reasons are given for this preference—superiority of texture greater durability less deterioration in washing and so on. Japanese embroidered cloth is also sold in some quantity. Indian gold-embroidered *saris* are however still always in demand for marriage occasions, and such *saris* borders for the same, and *phentas* (i.e., kamarbands) are always to be bought in this city.

18. The industry has declined not only in Ahmedabad, but also in Poona. In that town there are now said to be only 1,000 weavers at work, where ten years ago there were double that number. In the Ahmednagar district, where according to the census figures there were 786 silk weavers and spinners in 1911 silk weaving is already a thing of the past. The flourishing condition of the industry in Surat, therefore must be regarded rather as an exception than as the rule in the Bombay Presidency. The census figures for that Presidency (including Sind) show a decrease from 46,779 persons engaged in carding, spinning and weaving silk in 1901 to 38,594 silk spinners and weavers in 1911 though the figures for the Bombay States show an increase from 4,290 to 5,543. On the other hand the number of persons engaged in the cotton hand-weaving industry was in 1901 only 227,303, whereas the number of persons employed in spinning, weaving, and sizing cotton in 1911 was 614,518. It appears therefore that while the cotton hand-loom industry has greatly increased in the Presidency, that of silk has seriously declined.

A comparison of the census figures for 1901 and 1911 shows further that all the chief silk centres of the Presidency have shared in this decline except Surat. The figures for the nine principal silk-weaving districts are as follows —

District.	1901	1911
	Silk carders, spinners and weavers, makers of silk braid and thread	Silk spinners and weavers.
Surat	11,856	13,209
Bijapur . . .	9,183	5,061
Ahmedabad . .	8,915	7,336
Dharwar	5,593	4,997
Nasik . . .	3,291	2,839
Belgaum . . .	1,588	993
Poona . . .	1,488	1,231
Sholapur . . .	1,378	328
Ahmednagar	811	786
TOTAL	44,103	36,780

Besides these, a certain number of persons, mostly women, are engaged on *bandhana*. These amounted in 1901 to 528 in Ahmedabad and 183 in Surat. This is still done, as already stated, in Ahmedabad, but from the above table it is clear that the decrease of weavers in this and most other centres has been very considerable. Such being the case, the very satisfactory state of things in Surat is all the more noteworthy. Surat is now one of the largest weaving-centres in India, and it is certainly not due to chance that the place in which the greatest diversity of manufactures takes place, and which finds markets for its goods not only in India itself but in Arabia, Turkey and Africa, should flourish while others decay. The lesson is clear enough—that there is no lack of markets for Indian silk manufactures if the merchants have sufficient initiative and acumen to find these markets and manufacture the kind of goods which they require. It is, I think, a fairly evident proposition that it is largely owing to the lack of these essentials of success in business that the silk-weaving industry in the Bombay Presidency is on the whole on the down-grade at the present time.

CHAPTER II.

The Silk Trade of Madras.

RAW SILK

Imports

1 Only a small portion of the raw silk used in the Madras Presidency is imported by way of the Madras Ports, most of the foreign silk comes from Bombay and Indian raw silk is received from Bengal and Mysore. The figures for the Railborne Trade are very little guide as to the quantity so received, as the following table will show —

Imports by Rail into Madras Presidency

Article and whence imported	1910-11	1911-12	1912-13	1913-14	1914-15
<i>Foreign raw silk</i>	Mds	Mds	Mds	Mds	Mds
Bombay Port	185	43	132	3½	57
Mysore				105	42
Other places		3			
TOTAL QUANTITY	185	46	132	108½	99
<i>Indian raw silk</i>					
Mysore	3,571	3,397	1,856	2,650	1,245
Other places	27	7	23	15	11
TOTAL QUANTITY	3,598	3,404	1,879	2,665	1,256

From this table it would appear that comparatively small quantities of foreign raw silk have been received in the Presidency, and no Bengal silk (except such petty quantities as may be included under "other places") is used there. This is altogether incorrect inasmuch as Bengal silk is still being received in very considerable quantities in several of the largest silk centres of the Presidency. The explanation is not far to seek. In Trichinopoly Rs ½ lakh's worth of Bengal silk is said to be used in a year and Mysore silk is also largely employed. The whole of this amount is imported direct from Bengal and Mysore by passenger train, and consequently none of it appears in the official railborne returns. The latter cannot therefore be accepted as any guide to the quantity or nature of silk used in the Presidency, but the heavy decrease in the reported transactions in Mysore silk may be an indication of a real decrease in the amount consumed, though it requires confirmation from other sources.

Most of the foreign raw silk which is not obtained from Bombay is imported *via* Tuticorin, but imports from Japan are sent to Madras Port. The following table shows the quantity of such raw silk imported into the sea-ports of the Madras Presidency —

Article and whence imported	1910-11	1911-12	1912-13	1913-14	1914-15
<i>Foreign raw silk</i>	lbs	lbs	lbs	lbs	lbs
China*	1,454	38,000	119,389	87,175	67,736
Japan			536	4,467	11,028
TOTAL	1,454	38,000	119,925	91,642	78,764

*(Exclusive of Hongkong and Macao)

In addition to these amounts of raw silk, a very small quantity of waste was imported in 1912-1913, and 4,854 lbs from France in 1913-1914. Previous to 1910-1911 the import of silk appears to have been altogether negligible. It will be seen that imports from Japan only started in 1912-1913; in three years they have risen in value from Rs 2,880 to Rs 55,000, about 14 per cent of the total import. Reasons have been given elsewhere, however,* for the belief that Japan cannot under present conditions be regarded as likely to become a serious competitor of China in this trade, since only the coarsest kinds of Japanese silk appear to be exported to this country at the present time. It is probable that the comparatively heavy consignments received in 1914-15 should be regarded rather as samples, and the recent rise in prices, combined with the apparent general dissatisfaction with such silk in the Presidency, encourages the belief that a decrease is to be expected in the near future †

2 It will be noticed that no raw silk is imported from Hongkong and consequently all the silk received from China is from the northern provinces and not from Canton. The coarse South China silks—panjam, mathow and the like,—so largely used in North-West India, do not appear to be employed at all in the Madras Presidency where silk of this nature is needed, as in the manufacture of sashes at Conjeeveram, winding waste obtained from the silk ordinarily in use is employed for the purpose. The official returns do not show the amount of the various kinds of silk imported, but a list of this nature has been kindly supplied to me by the Madras Customs Office, for the year 1915-16. From this it appears that foreign raw silk of the following kinds was imported during that year in the undermentioned quantities —

Imports of raw silk into the Presidency of Madras in 1915-16

Description of silk	Quantity	Value
	lbs	Rs. †
<i>From China</i>		
Yellow Minchow	27,264	1 44,230
„ Kobin	11,627	8,400
„ Shantung	2,222	12,402
White Lie Laying	5,228	26,530
Noyang (? Meang)	2,380	10,862
“ Yellow Zyanchina ” (?)	3,291	11,766
Other kinds]	4,206	22,570
TOTAL	56,218	2,86,760
<i>From Spain</i>		
Yellow raw silk	268	1,340

Just 50 per cent, therefore, of the whole import from China was the kind known as Minchow from the Sz-Chuen province, and over 20 per cent Kobin (or Kopun or Gubin) from Ngan-wei. The former is used for making the warp in most of the big silk-centres in the Presidency. A considerable amount of various qualities of the white silk from Kiang-su, Lie-laying or Kakaria, is also used at Kumbakonam, Salem, Conjeeveram and other places,

*I vide page 7

†Since writing the above, I have been informed by the Madras Customs Department that no Japanese silk was imported during 1915-16. This appears to support the conclusion arrived at above.

and Mookchand from the same province is also used in Kumbakonam. The amount shown in the above list is of course only a fractional part of the whole quantity of Chinese silk consumed in the Presidency. What that quantity may be is impossible to estimate, but in Kumbakonam alone a leading silk-merchant put the value of raw-silk sold there during the year before the war at Rs 40 lakhs, and 75 per cent of this was estimated to be Chinese silk. Similarly at Conjeeveram one of the chief dealers estimated that Rs 10 lakhs worth of silk was consumed there a year, and that 50 per cent of this amount was from China. It is equally difficult to make any estimate of the amount of Mysore and Bengal silk in use. In Coimbatore only the former appears to be employed, Chinese and Japanese raw silk having been tried but rejected. In Salem, again, Mysore silk is largely used, being preferred to Chinese by the merchants for the manufacture of *saris*, though it is said that Chinese silk is easier to handle in weaving and is therefore preferred by the weavers themselves. In Conjeeveram, where a great deal of silk-weaving is done, it is said that 10 years ago only Mysore and Bengal silk was used, but now half the total quantity comes from China. On the other hand, it is also alleged that whereas only Rs 4 or Rs 5 lakhs of silk was used 10 years ago, Rs 10 lakhs is used at the present day, and if this is true the use of Indian silk cannot have decreased, in spite of the increase in the use of the Chinese material. In Kumbakonam only one-eighth of the raw silk sold is said to be from Bengal and Mysore, but even this quantity must amount to several lakhs in value, the amount of raw silk sold in that town being very great. In Trichinopoly nearly all the silk used seems to be from Mysore or Bengal, the amount of the latter being estimated at Rs $\frac{1}{2}$ lakh a year, while in Madura it is estimated that 90 per cent of the silk used is Chinese and about 8 per cent Mysore. The amount of Bengal silk used in Madura is very small. It is clear, therefore, that very considerable quantities of Indian silk are consumed in the Madras Presidency, and the figures for import shown in the Railborne Trade returns are probably very much below the real amount imported. According to these returns the import varied from 3,598 maunds, valued at nearly Rs 22 $\frac{1}{2}$ lakhs, in 1910-1911, to 1,256 maunds, valued at Rs 8 $\frac{1}{2}$ lakhs, in 1914-15. All but a negligible quantity of this is shown as coming from Mysore. It may legitimately be doubted whether imports of Mysore silk have decreased as heavily as appears from these figures. Recent statements published by the Mysore State, showing railborne exports, put the quantity and value of raw silk exported from that State at a much higher figure, and a very large percentage of the whole amount certainly goes to Madras. Moreover, even these figures can certainly not be taken as complete, for not only is road-traffic not included but also exports by passenger train are not taken into account in the returns, and, as has been said elsewhere, Trichinopoly, to take a single instance, certainly imports supplies of Mysore raw silk by this method. The figures for the Railborne Trade of Mysore in silk are given below for comparison with the table on page 35 --

Exports of Indian raw silk from Mysore State by rail

Year	Quantity	Value
	Mds.	Rs.
1910-11	5,300	35,28,000
1911-12	4,000	22,50,000
1912-13	2,000	10,92,000
1913-14	5,500	31,72,600
1914-15	4,404*	21,74,737

* NOTE —Includes 762 maunds of waste valued at Rs 13,622

The values here given are however deceptive, silk waste being included and valued at the rate fixed for raw silk, until the third quarter of the year 1914-15. The figures for the year 1915-16 are probably more reliable. During the first three quarters of that period 3,839 maunds of raw silk and 2,338 maunds of waste were exported from Mysore, the value of which, according to the average rate prevailing in the previous years, would be about Rs 22 $\frac{3}{4}$ lakhs. If the export during the last quarter of the year was in the same proportion the total for the year must have been about 5,000 maunds of raw silk and 3,000 maunds of waste, worth about Rs 30 lakhs in all. A very large portion of this must certainly go to the Madras Presidency.

3 As regards Bengal silk, it would be unwise to venture any estimate of the quantity consumed in the Presidency. Although, however, a considerable amount is still in use, the quantity so consumed is almost negligible in comparison with the enormous supplies which reached the Presidency from Calcutta formerly. Figures for the years 1889 to 1898 are given in the Monograph on the Silk Fabric Industry of the Madras Presidency, published in 1899. Therein it is stated that "the supply of raw silk is obtained almost entirely from Calcutta. In other words Bengal silk is largely used by the weavers." This is certainly not the case to-day. An analysis of these figures is given below, side by side with the statistics for imports of Indian raw silk (practically the whole of which is from Calcutta) during 1900-1901 and following years by coastwise trade into the Presidency.

Imports of raw silk from Calcutta

Year	lbs.	Rs
1889	219,288	10,80,835
1890	234,710	11,75,998
1891	273,949	13,72,030
1892	242,377	12,22,828
1893	106,087	4,82,848
1894	105,300	5,21,785
1895	205,733	10,21,603
1896	278,728	13,92,140
1897	119,102	6,07,444
1898	65,825	3,33,634
1899 00	51,492	2,62,504
1900 01	58,729	2,97,710
1901 02	30,424	1,38,412
1902 03	14,024	72,164
1903 04	8,578	42,890
1904 05	9,900	50,300
1905 06	3,166	18,484
1906 07 to 1914-15	Nil	Nil

These figures are eloquent of the failure of Bengal silk. It has already been said, however, that silk from Bengal is still obtained by passenger train and used in some quantity in Trichinopoly, Conjeeveram, Kumbakonam and elsewhere. Nor should it be concluded from these figures that the total quantity of raw silk consumed in the Presidency has decreased. On the contrary it is beyond doubt that it has considerably increased in the last 10

years in almost every one of the silk-consuming centres except Tanjore. According to the Census Returns the number of persons engaged in silk spinning and weaving in 1911 was 74,764, whereas the total number of silk carders, spinners and weavers, and makers of silk braid and thread, was in 1901 only 55,126. It is true that these figures are not wholly reliable, cotton weavers, who use a little silk for borders, being sometimes apparently included as silk weavers, and *vice versa*. Nevertheless, local enquiries and observations put it beyond question that the use of silk has actually increased in this Presidency. In Kumbakonam and Conjeeveram the amount of silk used is said to be double or more than double what it was 10 years ago, and the former of these places is the largest distributing centre in the Presidency, and the latter probably the largest centre of silk-weaving. In Coimbatore, again, the use of silk is said to have increased, and the largest importers of silk in the Presidency agree that practically in all places this has been the case. In Tanjore, it is true, silk-weaving has disappeared, mercerised cotton having replaced it on the looms, but this affects only some 350 persons, the chief industry of the town being the winding of silk for merchants of Kumbakonam.

The war has, of course, affected the silk industry, and the above estimates must be taken to refer to the period immediately before its outbreak. The effect of the war has been twofold. In the first place, the failure of German and Swiss aniline dyes has caused many looms to cease working. In Trichinopoly alone 500 out of 2,000 looms are said to be idle from that cause. The price of such dyes advanced from 11 or 12 annas a tin to Rs 13 or more, and dyes now received by the merchants from importers' pre-war stocks are said sometimes to be adulterated, presumably to increase the quantity available for sale. Certain vegetable dyes—lac, cochineal, kamela powder and indigo—are regularly used for reeled silk, but apparently rarely or never for cheap materials, such as spun silk and mercerised cotton. It is likely, therefore, that the use of such materials also is decreasing from lack of cheap dye-stuffs. This scarcity of dyes is naturally causing great uneasiness to all persons connected with the silk industry, though there seems to have existed a general expectation that England would be able to supply an article to take the place of the German stuffs. Recently in the Punjab a rumour that Japan was putting a cheap substitute on the market brought down the prices with a run from Rs 13 to Rs 8-8, but the rumour has not materialized. In the second place, the price of all raw silks has advanced very greatly since the beginning of the war, largely as a result of the heavy increase in the demand from America. Indian raw silks—Mysore and Bengal—have also advanced, apparently from sympathy, but not so greatly as the Japanese and Chinese material. This increase in the price has caused an entire cessation of imports of Chinese silk in some centres, as in Conjeeveram, where no such silk has been received for the last four months, and in others a great reduction. In Kumbakonam, for example, one merchant informed me that before the outbreak of war he imported 600 piculs* direct from China and about 20,000 piculs through Bombay, but since the war the amount has fallen by 25 per cent. Similarly in Madura another merchant stated that before the war he sold 100 seers of Chinese raw silk a month, whereas he now sells only 50. Importers have in consequence begun to look about for a cheaper substitute for Chinese silk, and in Kumbakonam the merchant referred to above has imported a very cheap and coarse silk, apparently from Indo-China, and stated that during the preceding month 20 boxes (containing $5\frac{1}{2}$ maunds each) of this kind of silk were received in Kumbakonam. The demand for Bengal and Mysore silk has also apparently increased, though both of these are too high-priced to be taken as a substitute for the cheaper qualities of foreign silk. Thus Malda and Mysore silk are said to cost Rs 13-8 per Bombay seer (or 72 tolas) in Kumbakonam, whereas the cheap silk mentioned above sells for about Rs 11, and cheaper qualities of Chinese silk—such as inferior Meang or Kobin—only cost Rs 12-8 to Rs 13. The supply of Indian silk, however, even at present appears hardly to be equal to the demand, so that the Indian raw material is not in a position to gain in the market by the fall

* 1 picul = 133½ lbs

in the demand for the Chinese article. In Trichinopoly, where Indian silk is mostly used, it is said that the demand is not greater than the supply at the present moment, owing to the present high and fluctuating prices and to the lack of dye-stuffs, but that under normal conditions, such as prevailed before the war, double the quantity of Mysore and Bengal silk would be used if it were obtainable. The merchants complain that sometimes when the demand increases the prices immediately rise in proportion, revealing a scarcity of the article and driving the would-be buyers to purchase Chinese or other silk instead.

This is undoubtedly one of the principal causes of the failure of the Bengal raw silk in the Madras market. From enquiries made in the silk centres themselves it appears that this failure is due in the first place not so much to any defect in the silk itself as to lack of supplies pure and simple. Even at the prices ruling before the war more Bengal silk would apparently be readily taken, and if only production could be slightly cheapened there is an enormous and expanding market waiting to receive it, as can be judged from the import figures for the years 1889 to 1892 or 1895 and 1896. There is, of course, a general complaint that Bengal silk is very badly reeled, and one weaving master in Conjeeveram asserted that he would be willing to pay Rs 5-8 or even Rs 5-12 a (*Madras) seer for Bengal silk for which he now pays Rs 5, if the silk were re-reeled and the knots eliminated,—and this in spite of the fact that Mysore silk stood only at Rs 4-8 and Chinese at Rs 4 or Rs 4-4. From this it might be concluded that improvement of the method of reeling is necessary before the demand will increase, but such is not the case, because there are in fact two quite distinct kinds of demand for raw silk in the Madras Presidency. In the first place a particular kind of raw silk is required for a warp: this must be fine, even, and strong, and the Chinese “Minchow” seems to fulfil all the requisites, though the best qualities of other kinds of silk are also sometimes used for the purpose. Thus in Salem Shantung re-reeled, costing Rs 30 per viss (=5 seers) or Rs 18 a Bombay seer, and the best quality of Mysore (Indubadi), at about the same price, are used for warps, and in Conjeeveram Malda silk at Rs 15 a seer is employed for the same purpose. Here, as has been said above, a higher price would be given for better-reeled silk because it is wanted for warps. In Trichinopoly on the other hand, Mysore silk, costing (including freight charges, etc) Rs 184 per maund of 40 Madras seers, or about Rs 13-8 a Bombay seer, appears to be mostly used for the purpose, and consequently the ordinary quality Malda silk mostly received, which costs Rs 160 a maund or Rs 12 a Bombay seer, satisfies the buyers as it appears to be mostly for a weft thread that it is required. In Kumbakonam and in Madura “Minchow” is used almost entirely for warps, Malda being found too weak and Mysore also rather too full of knots for the purpose. In these places, in consequence, an improvement is demanded in the reeling of the Indian silks. The reason for these various opinions is that besides the demand for a suitable thread for a warp there is also an equal demand for silk for the weft and the one absolutely indispensable attribute of this must be cheapness. Thus in Coimbatore, where all warps are of cotton, unless silk is specially ordered by a customer, the silk dealers are perfectly satisfied with Mysore silk as it is, and do not ask for any improvement in the reeling. This is probably the reason why experiments in finer reeling made in Kollegal (in Coimbatore District) failed for lack of a market for the improved silk, because in this district, the warps being mostly of cotton, the present reeling is good enough, and it is not worth while for the dealers to pay a higher price for a better thread for the weft. It has already been seen that in Kumbakonam an exceedingly coarse Indo-China silk seems likely to find favour simply because it is cheap, though it is far too coarse to make a good warp. Even the Chinese “Kobin” is only used for the weft at Salem for the manufacture of good cloth.

4 There are therefore two distinct ways by which the market for Bengal silk and indeed Mysore silk also could be improved. These are (1) cheapening

*1 Madras seer=24 tolas and 3 Madras seers=1 Bombay seer

the processes of production and consequently putting the silk on the market at a slightly lower price, and (2) improving the reeling. Of these two methods the latter is by far the more uncertain since the market for such silk will be largely limited to the quantity of silk-warps required, and in many places cotton is being used for the purpose, and moreover such silk will have to conform to a very high standard and will be forced to compete with the best of the Shanghai silks. The other method, if it is possible, offers, in my opinion, a more satisfactory prospect. There is already—at normal times—a greater demand than can be met by the supply, and the more the cost of the article can be cheapened the greater will be the demand to an almost unlimited extent. Prices being equal, the better quality silk or the better reeled will of course be preferred, but for ordinary uses the silk weaving master and dealer is unwilling to pay a higher price for better quality, so long as the lower-priced silk is capable of being used as the weft thread in weaving. It must be noted here also that *finer* reeling is not apparently required. In Conjeeveram Malda is said to be preferred to any other silk and Mysore to rank second, except as regards price. It is owned that Chinese is better reeled, but on the other hand the Indian silk is said to take the dye better and Mysore is alleged to be stronger than the Chinese. Therefore, though the weavers themselves generally prefer to work with Chinese silk, inasmuch as, being better reeled, it is easier to handle, the merchants and weaving masters generally prefer the product of Mysore or Bengal, especially the latter. Mysore silk is said to be, if anything, too thin. It is trebled or quadrupled for the warp and doubled for the weft before use. I particularly questioned the dealers and weavers in this and other places on this subject, and in no case did they answer that finer reeling would be beneficial. In Conjeeveram one of the biggest importers assured me, in fact, that the increase in Chinese raw silk has been due solely to its cheapness and indigenous silk is even now preferred by those who can afford it, as it retains dyes better than the other, and T. L. V. Krishnan, silk merchant of Warur, Trichinopoly, asserted that finer reeling was not required, “Cossimbazar” silk being even now sometimes *too fine*. Munisami Ayyar of Madura, also, stated that five years ago only Mysore silk was used and that he would use it now if it were only cheaper and *better*-reeled, it was not, however, wanted any *finer*. It seems therefore that no serious change in the present method of reeling is at all advisable, only greater care might be taken with profit in the process, so as to eliminate the frequency of breaks in the thread, which are a cause of complaint among the weavers. T. L. V. Krishnan, the silk merchant of Warur, Trichinopoly, referred to above, states that the standard varies very greatly in Bengal silk. Mysore silk is generally better reeled than Bengal silk, but that known as “Cossimbazar” is better in this respect than Mysore. This kind of Bengal silk is now said to go chiefly to Benares. This merchant stated that he preferred Bengal to Mysore silk as the latter loses more weight in bleaching, and that he was ready to bear the expense of samples of different qualities being sent to him, so that he could choose what suited him best, having himself written several times and failed to receive a reply. This appears to show either a complete shortage of supplies or a great lack of commercial organization, for although agents are said to come to the Madras centres from Rampur, Malda, etc., it seems to be difficult for a dealer to obtain exactly what he requires. Far more important, however, than anything else is the need for some process for cheapening the methods of production, so as to enable the raw silk to be sold at a cheaper rate, when it should certainly be able to compete successfully with all but the very finest qualities of Chinese or other foreign silk.

Exports

5 Large quantities of waste silk and cocoons are exported every year from Madras Port to Europe. Though silk is produced in the Kollegal taluk of the Coimbatore district, bordering on Mysore, there is no sericulture elsewhere in the Presidency. The exports may therefore be taken as almost wholly of Mysore silk. The following table taken from the Railborne Trade Returns of the Mysore State for 1915-1916 (first three quarters) shows that practically the whole amount of waste silk exported from that State goes in

the direction of Bisanatham, *ie*, in the direction of Madras, only a small quantity going *via* Harihar, towards Bombay —

1915 1916	EXPORTS OF SILK WASTE FROM MYSORE PROVINCE IN THE DIRECTION OF		
	Bisanatham	Hindupur	Harihar
	Mds	Mds	Mds
During Quarter ending 30th June	75½		38
" " 30th September	1,165¼	1½	10¼
" " 31st December	1,021½		28½

Figures for this export trade from 1889 to 1898 are given in the Madras Monograph on the Silk Fabric Industry and an analysis of these is appended together with figures for recent years, taken from the Seaborne Trade Returns, to bring the former up to date —

Exports of waste silk from Madras

Year	Great Britain	Marseilles	France	Italy	Others	TOTAL VALUE
	lbs	lbs	lbs	lbs	lbs	Rs
1889	211,723		9,078		45	2,08,612
1890	223,247				500	2,05,167
1891	167,760		1,968		3,276	1,50,123
1892	196,733		28,865			1,92,870
1893	202,599		27,322			1,92,460
1894	101,262					1,56,867
1895	270,578	18,128	26,238			2,62,719
1896*	7,019	217,815				1,27,042
1897*	10,060	256,580				1,33,669
1898*	10,259	270,118				1,55,127
1899 00	37,127	240,133				1,65,851
1900 01	45,290	303,388				2,72,115
1901 02	2,196	357,977		225		2,92,239
1902 03	32,615	408,152			699	3,10,151
1903 04	669	399,493		225	10,395	3,12,777
1904 05		272,188				1,68,077
1905 06		456,050		225		2,19,125
1906 07	1,232	371,515		2,975		2,93,929
1907 08	1,217	276,222		83,513		2,15,775
1908 09		489,876		82,812		2,73,976
1909 10	2,350	479,680		117,090		3,51,151

* The figures of the Madras Monograph for the first three years of exports to Great Britain, and increased exports to Marseilles, are not to be attributed to the abolition of steamboat traffic. It will be seen that the figures for the years 1896-97, 1897-98, and 1898-99 are included in the total value of the exports of waste silk from Madras.

Exports of waste silk from Madras—contd

Year	Great Britain	Marseilles	France	Italy	Others	TOTAL VALUE
	lbs	lbs		lbs	lbs	Rs
1910 11	6,977	262,665		77,819		2,19,248
1911 12	12,847	288,662		73,968	2,730	2,17,141
1912 13	6,940	236,522		50,824		1,78,731
1913 14	17,494	175,772		62,800		1,75,776
1914 15	7,594	43,989		17,606		50,575

Most of these exports from 1899-1900 to 1914-1915 are recorded in the Returns as "wild silk" waste. It does not seem possible, however, that they can be other than Mysore mulberry silk waste, for no other province than Mysore sends raw silk to the Madras Ports in any quantity. The Inland Trade Returns (Rail and River borne) for 1913-1914 show that 111 cwt of Indian raw silk from Madras, and 1,947 cwt from Mysore were despatched during that year to the Madras Ports, or about 12,500 and 230,500 lbs respectively. Exports of the same material from Madras Port to the Madras Presidency and Mysore amounted only to 46 cwt or 5,352 lbs, leaving a net import of nearly 240,000 lbs. Allowing for some inaccuracy in the figures for rail-borne trade this result tallies sufficiently closely with the total quantity of chassam exported by sea during that year (*viz*, 256,066 lbs), the whole of which is, however, recorded as "wild silk," no mulberry waste having been exported, according to the Returns, during that period. We shall probably be correct therefore in taking the whole of these so-called "wild silk waste" exports as exports of Mysore (or Kollegal) mulberry silk waste, though what actual difference exists where mulberry silk waste is distinguished from "wild silk" waste in the Returns, it is difficult to say. Assuming, however, that the whole of these exports of chassam are of mulberry silk, we have some guide to the amount of such silk produced in Mysore. It will be seen from the table that though the value of this waste silk has fluctuated between Rs 1¼ lakhs and Rs 3½ lakhs during the years 1889 to 1913-14 the figure has been generally higher during recent years than previously, from 1905-1906 to 1911-1912 never sinking below Rs 2 lakhs and rising in 1909-10 to the highest recorded—*viz*, over Rs 3½ lakhs. It is true that since that date there has been a steady diminution, but the average yearly value from 1909-1910 to 1913-14 was over Rs 2¼ lakhs, whereas that of the period from 1904-1905 to 1908-1909 was a little under the same amount, and the average for the ten years 1889 to 1898 was only a little over Rs 1¾ lakhs, though there was a considerable increase in the five succeeding years. In 1914-1915 the value of the exports of waste was only Rs ½ lakh, but this sudden heavy decrease may be confidently ascribed to the effects of the war upon the silk trade, the whole of the export ordinarily going to France, Italy and the United Kingdom. In this context the following excerpt from the "Foreign Railborne Traffic of the Mysore State"* for the year 1914-1915 published by the Mysore Economic Conference, may be quoted on the subject—"During the first half of the year under review, the exports of reeled and raw silk together were 1,733 maunds as compared with 2,362 maunds in the previous year. The falling off in the second quarter, when the trade was seriously dislocated by the outbreak of war being more than 50 per cent. In the third quarter the silk trade was still in a very depressed condition, whilst in the fourth quarter a marked improvement is shown and nearly normal conditions in regard to quantity of silk exported were reached. Prices, however, continued to be seriously depressed and are likely to remain so as the demand for silk which is an article of luxury, has been seriously affected by the war." Nevertheless the export of silk waste by

*By Alfred Chatterton, F.C.I., C.I.E., Director of Industries and Commerce

rail from Mysore during the first three quarters of the year 1915-1916 reached 2,338 maunds or over 190,000 lbs., and if the export during the last quarter was in the same proportion the total export should certainly equal that of 1913-1914 (256,000 lbs). The low figures for 1914-1915 may therefore be disregarded in estimating the present normal output of Mysore silk

It is frequently asserted that there has been a very great decrease in this output. Thus Mr K Subha Rao, Assistant Secretary to the Government of Mysore, General and Revenue Departments, states that the total area under mulberry was in 1913-1914 about 28,233 acres, and estimates the income as at the lowest Rs 50 lakhs, whereas it is said formerly to have amounted to Rs 75 lakhs or a crore. Other estimates, however, do not agree with this at all. The following statement, supplied me by Mr P G D'Souza, Secretary, Mysore Economic Conference, puts the area under mulberry cultivation during preceding years at a much higher figure, and there is no good reason for believing that nearly 40,000 acres out of 67,000 went out of mulberry cultivation in a single year.

Statement showing the area under mulberry from 1902 to 1912

Year				Mulberry
				Acres
1902 03	.	.	.	42,241
1903 04	.	.	.	44,605
1904 05	.	.	.	41,069
1905 06	.	.	.	71,821
1906 07	.	.	.	57,160
1907 08	.	.	.	64,485
1908 09	.	.	.	67,942
1909 10	.	.	.	69,520
1910 11	.	.	.	80,192
1911 12	.	.	.	69,022
1912 13	.	.	.	67,778

A B — According to Statistics compiled by Mr K R Srinivasanagar

These figures are supported by the following estimate from the same source which so far from showing any great decrease of exports in 1913-1914 shows on the contrary a heavy increase incompatible with a great reduction in the area under mulberry cultivation

Statement showing value of silk exported from the Mysore State

Year	Value in Rs Lakhs	Year	Value in Rs Lakhs
1904 05	28.82	1910 11	22.70
1905 06	9.12	1911 12	} Not available
1906 07	77.60	1912 13	
1907 08	48.17	1913 14	77.52
1908 09	78.00	1914 15	21.01
1909 10	71.77		

These estimates are, it is true, confessedly only approximate, and in so far as they are founded on the railborne trade returns must be regarded as unreliable for reasons already given. There is no reason, however, to prefer the lower estimate, and it must be confessed that very few facts are really available to guide us to a reliable estimate of the silk-output. Mr Chatterton, Director of Industries and Commerce, states that he has no evidence that there has been any marked fluctuation in the output of silk in Mysore during recent years, and certainly, though there does seem to have been rather less Mysore silk used in the Madras Presidency, its chief market, there is nothing to confirm the view that a very heavy decrease has occurred. The figures for the export of waste silk by sea from Madras seem, indeed, to be the only guide and from these (as has been seen above) it does not appear that the industry is at all in a state of jeopardy.

Exports by sea of raw silk and cocoons are of no great value. Both are mainly to France. Below is given a table of such exports, taken from the figures given in the above mentioned monograph for the years 1889 to 1898, and extracted from the Annual Sea-Borne Trade Returns of the Presidency for the remaining period.

Exports of raw silk and cocoons from the Madras Presidency

Year	RAW SILK (VALUE IN RUPEES)				COCOONS (VALUE IN RUPEES)			
	Great Britain	France	Others	Total	Great Britain	France	Others	Total
1889	760	15,010		15,770	2,565	5,000		7,565
1890	15,772	28,146		43,918	3,872			3,872
1891	828	300		1,128	13,920	489		14,409
1892	640	1,400		2,040	2,205	3,350		5,555
1893			1,670	1,670	8,070	16,207		24,277
1894		128	1,500	1,628	1,611	686	1,012	3,309
1895					1,789			1,789
1896		20,187	102	20,379	2,081	2,559		4,642
1897			4,107	4,107	459	1,148		1,607
1898			1,250	1,250		4,957		4,957
1899-1900								
1900-01						9,731		9,731
1901-02					5	11,411		11,416
1902-03					1,500	19,980		21,480
1903-04		6,720		6,720	1,125	15,075	450	16,650
1904-05						17,787		17,787
1905-06						24,788		24,788
1906-07		1,375		3,375	1,280	4,957		6,237
1907-08					11,172	4,066		15,238
1908-09						960	4,543	5,503
1909-10					6,046	937		6,983
1910-11					2,849	5,524	2,082	10,455
1911-12						15,350	3,255	18,611
1912-13						7,009		7,009
1913-14						11,950	2,730	15,680
1914-15						2,230	270	2,500

From these figures it is plain that the raw silk export was at the best a very small and uncertain one, and has ceased entirely of recent years. The export of cocoons, also, is of very fluctuating value there seems however to be a regular trade in these articles with France. These figures include both mulberry and wild silk which are differentiated in the Returns (*vide* above page 43). It seemed best to amalgamate the figures for reasons given above. Probably by far the larger portion, if not indeed all, of the raw silk and cocoons exported were in fact Mysore mulberry silk, as there is no trace of any other province sending wild silk to Madras for export to Europe, whereas it is certain that Mysore mulberry cocoons are shipped to France and Italy.

6 Exports by rail to other provinces are of more importance, as will be seen from the following figures —

Exports by rail from Madras of Indian raw silk.

	Maunds	Rs.
1910-11	237	1,43,245
1911-12	270	1,48,167
1912-13	169	93,475
1913-14	387	2,14,250
1914-15	297	1,93,545

Most of this silk is shown as going to Bombay Port, though a considerable quantity is also recorded as exported to Mysore. The chief exporting blocks are South Carnatic, Deccan, North Carnatic, and Madras Port, in that order. The South Carnatic includes the silk-centres of Chidambaram, Kumbakonam, Mayavaram in South Arcot, and the Tanjore district. the Deccan includes Bellary, Dharmavaram in Anantapur district, and other centres and the North Carnatic block includes the great weaving centre of Conjeeveram. What portion, if any, of this export is waste silk it is impossible to say as the figures for waste and reeled are not given separately in the railborne trade returns. Exports of foreign raw silk by rail are also mostly to Bombay Port and Mysore, but they are of very small value and do not require further consideration. A small quantity of Indian raw silk was also formerly exported by coasting trade to Calcutta (*viz*, 560 lbs valued at Rs 3,200 in 1899-1900, and 462 lbs valued at Rs 2,900 in 1900-1901), and in 1901-02 300 lbs at Rs 2,000 and 1903-1904 336 lbs at Rs 672 to Burma. These exports have, however, entirely ceased. To judge by their registered values the first three of the above-mentioned consignments were reeled silk, of the nature of the last-mentioned, valued at Rs 2 a lb, there is no indication.

Silk substitutes

7 Before leaving the subject of the raw material a few words must be added on the use of substitutes for silk—*viz*, artificial silk and mercerised cotton. Artificial silk is treated in detail elsewhere and does not concern the Madras Presidency, where no such material appears to be used. Mercerised cotton, however is imported in considerable quantities either direct from England or from merchants of Bombay and Madras. Imports of mercerised cotton yarn into the Madras Ports amounted in 1914-1915 to 81,134 lbs, valued at Rs 1,63,474 of which 69,974 lbs at Rs 1,51,349 came from the United Kingdom and the remainder from Germany. Imports from the latter country must have entirely ceased and I found none of the German material in use in the Presidency. Japanese mercerised cotton is however largely used and evidently reaches the Presidency *via* Bombay. Figures for previous years are not available as the article was not separately recorded in the Returns but the use of mercerised cotton is said to be increasing in the Presidency. In Conjeeveram Salem and Trichinopoly none is used, or only a very small quantity where a white thread is necessary in the weaving of silk. In Madurai Coimbatore and Kumbakonam however a certain amount is used.

and large quantities are consumed on the looms of Tanjore. In Coimbatore it is generally used for borders, unless a special order is received for borders of silk, just as cotton and silk are ordinarily used for the body of the fabric unless orders are given for silk alone. In this town both the English and the Japanese articles are in use. In Madurai the English material is mostly used, but not in large quantities, the dyes on English mercerised cotton are found to be relatively fast, whereas the Japanese material will not retain the dye at all. In Kumbakonam Rs 10,000 worth is said to be purchased yearly, but only a small proportion of this (estimated at Rs 500 worth) is actually used in that town itself for a white thread in silk borders, the remainder mostly going to Tanjore. Both Japanese and English are imported and mercerised cotton is said to have supplanted spun silk in the market. The Japanese article, which is said to be frequently dyed in Bombay, is alleged to be inferior to the English, but to be cheaper. The reported prices are—English undyed Rs 13-4 (per bundle of 5 lbs), Japanese undyed Rs 10-4, English dyed Rs 15, Japanese dyed Rs 11 to Rs 12. The prices vary, however, according to quality and in this case the English article appears to be of considerably better quality than the Japanese. In Tanjore a great quantity is used, mostly for the manufacture of *saris* for a particular market. There are said to be at present 350 persons engaged in this industry, but this is a mere guess. The weavers were formerly engaged on silk, but the mercerised cotton industry has now been going on for nine or ten years, and goods to the value of Rs 5,000 a year are said to have been produced since the outbreak of war, formerly treble that amount having been sold. The weaving is in most of the regular silk patterns, even the "Solid-border" *saris* (for which three shuttles are used) being manufactured, and gold thread is plentifully used. The chief market is said to be to Indian Christians in the Presidency and in the Straits Settlements, the goods being used for special occasions and not being washed. Dyed Japanese material is mostly used, so that washing is practically out of the question. The weaving is admittedly far too good for the material, *saris* ornamented with gold lace selling for as much as from Rs 40 to Rs 150 for 7 yards. Without a gold lace border they may be purchased for from Rs 6 upwards. It is indeed a cause for regret that the silk-weavers of Tanjore have adopted this cheap and shoddy substitute for real silk, since the material is certainly not worth the fine weaving and gold thread put into it. So long, however, as the market remains the Tanjore merchants will naturally continue to supply it, and the weavers will continue to work with this material. Elsewhere in the Presidency, however, mercerised cotton does not appear to have any hold upon the market and there does not seem to be any fear that it will offer a serious menace to the silk industry.

SILK MANUFACTURES

Foreign Imports

8 Silk goods of foreign manufacture are not very largely used in the Madras Presidency. The total value of imports by sea into Madras Ports of silk manufactures (excluding yarns, noils and warps, which have been discussed elsewhere) amounted in 1914-1915 to just under Rs 1 lakh. As will be clear from the following table the greater part of this import trade is in pure silk piece-goods, goods of silk mixed with other materials having apparently been imported, however, in some quantity in 1912-1913 and 1913-1914.

Imports of silk manufactures (excluding yarns, noils and warps) by sea into Madras (value in Rs)

	Piece-goods.	Goods of silk mixed with other materials	Other kinds (thread for sewing, etc.)	TOTAL
1905-06	86,257	1,128	4,322	91,707
1906-07	71,060	3,174	4,463	78,697

Imports of silk manufactures (excluding yarns, noils and warps) by sea into Madras (value in Rs)—contd

	Piece-goods	Goods of silk mixed with other materials	Other kinds (thread for sewing, etc.)	TOTAL.
1907-08	44,236	5,757	3,189	53,182
1908-09	69,195	2,461	3,832	75,488
1909-10	79,027	490	8,221	87,738
1910-11	1,10,518	61	4,680	1,15,259
1911-12	1,08,305	5	7,098	1,15,408
1912-13	1,17,409	16,973	4,859	1,39,241
1913-14	1,34,793	9,665	7,679	1,52,137
1914-15	89,865	2,630	6,723	99,218

During the first five years of this period more than 50 per cent of the piece-goods imported came from the United Kingdom, presumably supplying the Presidency Town itself. During the latter half of the decade rather less has been imported from England and rather more from Japan, which in 1912-1913 supplied Rs 45,694 out of the total Rs 1,17,409, or almost exactly the same amount as came from the United Kingdom. A considerable portion of the remainder generally reaches Madras from the Straits Settlements. The other figures are unimportant, except for the mixed goods received in 1912-1913 and 1913-1914. These came chiefly from Germany, France, and England, and their decrease in 1914-1915 is due to the total cessation of imports from the two first-named countries, presumably on account of the war. A certain amount of foreign manufactured silk also reaches the Madras Presidency from Bombay by rail and coastwise. The Returns for the Rail-borne Trade show that only a few hundred rupees' worth of such articles are ordinarily despatched by goods train from Bombay, though in 1910-1911 the figure stood at nearly Rs 8,000. The bulk of this trade must, however, be sent by passenger train and is consequently not registered. In any case no very large quantity of foreign manufactured silk is used in the Presidency. In Trichinopoly a certain amount of Japanese silk is sold to Mohamedans. It is said that it has been coming in for the last ten years, and that the fine weaving and finish of the articles, combined with the range of patterns, which cannot easily be copied, and their cheapness, puts them beyond local competition. In Madura also Japanese silk goods are sold, but not in any considerable quantity. Piece-goods of cotton and artificial silk come from the United Kingdom, but only in a minute quantity. There does not seem to be any likelihood, therefore, of foreign manufactures ousting Indian-made silk fabrics from the market, the former only supplying a limited demand for silk of a particular quality or finish which cannot be supplied from the local market.

Indian Imports

9 Indian-made goods from silk-centres outside the Presidency appear to be rather more in demand, but the import of such is not a large one. In 1911-1912 the railborne imports of Indian manufactures amounted to Rs 37,330, mostly from Mysore. This is not a regular line of trade, however, small quantities of such articles coming in one year from the Punjab, and in another from the United Provinces, by rail, and from Bombay or other provinces by coasting vessels, these last being mostly goods of silk and cotton. In Trichinopoly Surat-made silk cloth and printed silk from Calcutta is sold, but in the main the local looms appear to satisfy the demands of the Presidency. In former years the imports by coastwise trade, mostly from Bengal, Bombay or Coi, reached a fairly considerable sum. Between 1896 and 1902

then average value was about Rs $\frac{1}{4}$ lakh, but in the succeeding decade it sank to a negligible amount. During the last three years (1912-13 to 1914-15), however, there has been some increase, especially in 1913-14, when goods valued at Rs 22,180, mostly from Bombay Ports, were received by coasting trade.

Exports

10 The export trade is a very much more extensive one. Mention has already been made of the trade between Tanjore and the Straits Settlements in mercerised cotton goods. The following table will give an idea of the export trade by sea as a whole —

	1910-11	1911-12	1912-13	1913-14	1914-15
SILK MANUFACTURES	Rs	Rs.	Rs.	Rs	Rs
<i>Silk Piece goods</i>					
To Ceylon	394	295	3,608	5,186	871
„ Straits Settlements	13,251	5,760	3,850	10,387	1,280
„ Federated Malay States	12,389	5,878	2,576	17,428	23,752
„ Natal	10,820	31,801	32,131	22,413	19,843
„ Other places	313	410	650	2,384	243
TOTAL	43,167	44,162	42,824	57,798	45,089
<i>Goods of silk mixed with other materials</i>					
To Ceylon	9,111	3,398	480	4,566	15,479
„ Straits Settlements	13,330	13,246	9,044	39,196	14,485
„ Federated Malay States	4,260	7,582	25,285	25,425	9,065
„ Natal	12,465	30,230	8,614	17,880	5,159
„ Other places	2,720	2,842	2,500	396	4,695
TOTAL	41,886	57,298	45,923	87,463	48,883
<i>Other sorts</i>	50	31	50		180
TOTAL OF SILK MANUFACTURES	85,103	1,01,491	88,797	1,45,261	95,052

Exports of silk manufactures to foreign countries are, therefore, on the increase. The heavy consignments of both pure silk and mixed goods to the Malay States are noteworthy. This market was apparently only discovered in 1909-1910, but since that year exports thereto have been steadily increasing. Similarly, exports to Natal appear to have begun about 1907-1908, and already it is normally the biggest purchaser of pure silk goods, and in 1911-1912 took more than 50 per cent of the total export of mixed goods also. The increase in the export trade from Madras by sea may be judged from the fact that in 1905-06 the figure reached only Rs 17,264, and the average for the five years 1905-06 to 1909-10 was only Rs 33,257. The export trade within British India, on the other hand, shows a very serious decrease. This trade is mainly by coastwise with Burma, and in the course of the last 15 years has, as the

following table will show, sunk from a value of several lakhs of rupees to a few thousand —

Exports of Indian silk manufactures coastwise from Madras ports

	PIECE GOODS		GOODS OF SILK MIXED WITH OTHER MATERIALS		OTHER SORTS	TOTAL
	To Burma.	Others.	To Burma.	Others		
	Rs	Rs	Rs	Rs	Rs	Rs
1899 1900 .	89,533	320	1,50,841	10,184	60	2,50,938
1900-01 .	3,53,579	915	2,35,793	8,650		5,98,937
1901-02 .	2,62,242	1,673	1,86,908			4,50,823
1902-03 . . .	73,906	520	29,740		390	1,04,556
1903 04 .	78,699	420	.	50	67	79,236
1904-05 . .	46,182	750	15,435	210	110	62,687
1905-06	23,424	886	10,148	297		34,755
1906-07 .	9,477	638	1,221	990	30	12,356
1907-08	21,989	965	1,080		128	24,162
1908-09	7,184	95	197			7,476
1909-10	15,228	179	48,264		194	63,865
1010-11	4,890		31,466		160	36,516
1911-12	2,056	225	20,188		10	42,479
1912-13 .	22,452	205	15,032		8	37,697
1913 14 . . .	3,625	3,706	21,918	298	400	29,947
1914-15 . .	920	4,205	3,816			8,941

This decrease more than balances the rise in exports to other countries, and I know of no satisfactory explanation for the comparative failure of the Burma market and the change of taste in that province. The place of Madras silk-goods has not been taken by local manufactures, for according to the census figures the number of silk spinners and weavers in the province fell from 34,029 to 18,621 between 1901 and 1911, and the figures for cotton-weavers also show a heavy decrease. Foreign imports of mixed goods, however, into Burma show a very marked increase, and these have apparently replaced the goods formerly obtained from Madras. Without local enquiries it is impossible to discover the cause of this reversal of public taste, or in what respect, if any, the Madras goods are less satisfactory than the foreign, or, indeed, whether the supplies from Madras have not merely been transferred to another market, and sufficient of such goods no longer being available the Burmese market is forced to turn to other sources of supply. The fact remains that the exports of Madras manufactures to that province are no longer of anything approaching their old importance.

Recorded transactions by rail in Indian manufactures are negligible during recent years, except in 1911-12, when 59 maunds valued at Rs 38,000 appear to have been imported (part from the Punjab to Madras Port and part from Mysore to the Deccan), and 24 maunds valued at Rs 17,000 to have been exported from the South Carnatic to Mysore. Ordinarily, however, manufactured silk is sent by passenger train and does not appear in the Railborne Trade Returns. Silk cloth manufactured at Coimbatore goes to the Bombay Presidency and is sold in Poona and other places, and silk turbans and other articles are exported from Trichinopoly to Secunderabad and elsewhere. Most of the silk goods made in Trichinopoly however are sent by passenger train to Madras for distribution, and no further information is available as to their ultimate destinations.

WEAVING IN MADRAS

11 It has already been said that according to the census figures the number of persons engaged upon silk spinning and weaving in the Presidency largely increased between 1901 and 1911. This is confirmed by the fact that it is stated on all sides that the amount of silk consumed in most of the large centres has increased during the same period. The most important of such centres are Kumbakonam and Mavayaram in the Tanjore district, Conjeevaram in Chingleput, Trichinopoly, Madura, Salem and Coimbatore. In Tanjore, as has been said, silk weaving has died out, though a very large amount of silk-winding takes place there. The most important importing centre is Kumbakonam, from which place the other centres largely draw their supplies of raw silk. The importers of that town receive foreign material either (in a few cases) direct from China, or (ordinarily) from merchants in Bombay or Madras. The material is paid for either immediately or within ten days of receipt, and is issued to the smaller merchants or employers of weavers. In this case credit is generally given, sometimes for several months, but the silk is of course sold at such a price as will allow for interest on the period for which credit is given. The raw material is sometimes issued just as it is received, but in other cases it is cleaned, bleached and dyed before selling. Thus the Japanese raw silk imported is dyed and made up into balls (*umdan*) two of which weigh 5½ seers (*i.e.*, 6 seers of raw silk as received), before sale. One importer keeps 15 twisting machines and 12 pin-winding machines, worked by women by which the silk is prepared for the local market. This same importer also advances silk yarn to the weavers themselves and buys the woven cloth from them. Ordinarily, however, the weavers are little more than servants of the small employers, who pay them a fixed price for a certain quantity of a particular kind of weaving, finding them in all the necessary material. Very frequently, in towns the looms are on the employers' premises and the weavers come daily to work as at a factory. The village-weavers come in to the towns to fetch the material and weave it at their own houses. It is the general rule for the weavers to take large advances from their employers, which leave them almost continuously in the employers' debt. This system prevails all over the Presidency. In Conjeevaram, for example, the merchants buy from the importers and get the silk prepared for weaving; it is then made over to the weaving community on the usual terms. The number of such merchants or employers of weavers is very great; in Coimbatore alone, for instance, there are said to be one hundred. Men of this position may employ from ten to two hundred or more weavers. The amount earned by the weavers varies according to the nature of the weaving and the speed with which they work. Generally it is said to amount to from 8 annas to Re. 1 a day, but I am rather doubtful whether the latter sum is ever reached, though this is said to be the case in a factory in Salem where six Amphill looms are in use for weaving saris valued at from Rs. 100 to Rs. 160. Elsewhere in Salem, however, the weavers apparently make at the outside 8 to 10 annas a day. In another factory in Kumbakonam, on the other hand, where the owner has set up seven Jacquard looms, the weavers are reported to earn from 8 to 12 annas a day, where before the installation of these looms they were able to earn 8 annas a day. If this is the case the employment of such looms has been of little or no advantage to the actual weavers. In Trichinopoly they are said to earn about Rs. 10 a month for weaving silk ornamented with gold lace, though a very skilled worker may make as much as Rs. 15. The weavers can, of course, purchase their own materials and weave them into cloth at their own houses, selling the woven article in the bazar. This system also prevails in some places side by side with the ordinary method, and in Trichinopoly a weaver is said to be able to earn as much as Rs. 20 a month in this way. On the other hand he may earn only Rs. 5 or Rs. 6, since he is unable to wait for a good price to be offered and must sell for whatever is given. Thus in Madura a silk-cloth merchant informed me that he bought both from employers of weavers and also from weavers themselves in the bazar, but that he paid less to the latter. In this way the weaver is heavily handicapped in any attempt to break away from the prevailing system and better his position. There are, however, two sides to the question of the weaver and the small employer. On the one hand, the employer is generally very much in the nature of a middleman. He generally does not himself import the raw material but buys it from the actual

importer, who usually resides in the same town. He may, it is true, get the silk prepared for weaving by giving it out to winders and dyers, to whom he pays about 8 annas a seer each for the process, frequently however, this also is done by the importers themselves. In such cases the employer merely buys the silk ready prepared and makes it over to the weavers, getting himself however all profit which may accrue from an improved market or other sources. I have frequently found such employers entirely lacking in initiative (though perhaps this is more commonly the case in the Bombay Presidency than in Madras) and, not being generally entirely dependent on their trade, they are often very unwilling to introduce any improvements or do their work otherwise than in the way "their fathers did it". Rather than change their old-fashioned methods they appear to be content to let the industry die out completely. This is certainly not nearly so much the case in Madras as in Bombay, but none the less the small employer is frequently a serious drag on any attempt to improve the conditions of the weavers or of the industry generally. I believe that the weaver himself, once he can be convinced that a proposed improvement will really enable him to earn more, is generally ready to adopt the new method. I am afraid this is not generally true of the small employer, who from lack of interest or lack of initiative will very often allow competitors to outstrip him rather than adopt a fully-demonstrated improvement. On the other hand, there is another side of the picture. The weaver, as a class, is said to be extravagant, careless, and very unreliable. They will not work at all until they have received a large monetary advance, and having received it they are said to require the eye of the employer to be constantly upon them, as cases of weavers absconding with their advances are reported to be the reverse of infrequent. The employer is consequently forced to protect himself and cover possible losses by reducing the rate of pay to a minimum and appropriating anything in the nature of extra profit himself. Similarly, any attempt to better the weavers' position by the establishment of a union or co-operative society has to contend against the disadvantage that it is by the nature of things unable to make large advances. In Conjeeveram owing to the zeal and energy of Mr P. Ramachandra Sastriar, the Secretary, a co-operative union has been started and was registered as "The Big Conjeeveram Urban Weavers' Union" at the end of 1905. The number of members of this Union was in 1915 about 300, of which more than two-thirds were weaver-members. All of these are, however, cotton-weavers; the silk-weavers of little Conjeeveram or Reddipet have so far resisted all attempts to persuade them to join. The population of the town was in 1911 53,864, of which about a fifth are said to be weavers (cotton and silk; the silk-weavers are given in the Census returns as numbering about 8,500), so that the percentage of weavers of any kind who have joined the Union is still very small. The object of the Union as stated in the By-laws is as follows —

"The object of the union is the improvement of the hand-loom industry and of the economic condition of the weavers residing in places named in by-law 2. For the purpose of attaining this object, it shall be competent to the union to raise the money required for the union from weavers and others, by issue of shares and by borrowing by way of deposits or otherwise, to purchase such raw materials and appliances as may be required for the industry and retail the same either for cash or credit to the weaver members residing in those places, to grant loans to them, to purchase and hold in common or let on hire improved appliances connected with the industry, to purchase or receive for sale the finished products of members' looms and sell the same to the best advantage and to do such other acts as may be conducive to the attainment of the general object of the union."

The following further details are taken from the By-laws. Any weaver over 18 years of age residing in the specified area and any non-weaver over 18 years of age residing in the Districts of Chingleput and Madras may, on his paying for one or more shares, be admitted as a member. The share money may be paid in instalments and the liability of each member is limited to the share capital subscribed by him. The capital of the Union is nominally Rs 50,000, divided into 10,000 shares of Rs 5 each. The admission fee is 2 annas per share, and 3,000 shares are reserved for allotment to weavers, preference being given in the allotment of shares to weaver-applicants. The Board of Directors is competent,

to make advances for weaving purposes to a limited amount and to lend money for the repayment of prior debts, limited to Rs 50 as the total amount payable to any single member. One fourth of the net profits are carried each year to the reserve fund and the balance is distributed as dividends and bonus on a fixed scale. It is interesting to observe the reasons given for the fact that in 1907 many members broke away from the Union, for these same reasons largely account for the comparative unsuccess of the Union among the cotton-weavers, and the total failure to bring in the silk weavers. These reasons are given as follows --

- “(1) The Union professed to help the weavers with loans to pay off their old debts, recovering them gradually from them later on. This the society *could not do*. Elsewhere they could get whatever money they wanted, no matter on what terms.
- (2) The Union professed to provide the members with yarn and appliances at favourable rates, but could not do so. It laboured under the same difficulties as the weavers had been suffering under for want of funds.
- (3) The Union paid fixed prices and held back from the sums so payable instalments in repayment of such advances as had been made previously. This withholding of instalments was rigorously observed whether or not further advances were made, however much they were needed. Elsewhere, much laxity is allowed in repayments, and further advances can be got whenever desired. Also the whole of the prices less some trivial deductions are paid into their hands, so that it is available to be spent in any manner they pleased.
- (4) The Union demands a certain standard of quality in cloths to be maintained, and also correct measurements. Elsewhere any article could be passed off, whatever its quality or measure be.”

Since August 1915 there has been a Reddipet Silk Weavers' Co-operative Society. This already numbers 50 members. It is doubtful, however, how far this society will benefit the weavers. It is a substitute for the employer in so far as it will give out loans, but there is apparently nothing to ensure that such loans are spent upon weaving purposes and not upon marriage expenses or other calls of the same nature. Were it not for the system of advances and the inability of the Co-operative Union to free the weavers from the clutches of the money-lenders by enabling them to pay off their previous debts, a Union like that of Big Conjeeveram might be a great success. At present, as has been said above, the weavers, when they bring their products to the market, do not ordinarily receive the proper price for their goods. It may be the case, it is true, that such goods are inferior, as is sometimes stated by the employers, but the fact remains that this inferiority must certainly be due to the weavers' knowledge that in all probability they will not get what their goods are worth, a knowledge which can only tend to produce careless and slovenly work. By such a Union as that of Conjeeveram the weaver-members have always a market for their goods—viz the Union itself, and though it is not necessary that every small employer should cease to give out work to weavers, at least he would be compelled by the competition of the articles sold by the Union, to pay fair rates for what he receives. The opposition of the small employers as a class is therefore to be taken into account, and unless and until the weavers can be released from the continuous state of debt in which they ordinarily live, it is hardly possible for a Union to number more than a fractional part of the weaver-community among its members. Even if this could be achieved, a great amount of persuasion must inevitably be necessary before the weavers will join the Union in any quantity, since under the present conditions they obtain almost unlimited advances for any purpose from their employers, whereas under Union conditions they can only receive the wages due to them and the profit accruing from their labour. In forming any society of this nature, therefore, it is primarily necessary to find out the extent of indebtedness prevailing among the community of weavers, and the amount of advance which they ordinarily receive. If this is very large, considerable funds and even greater powers of persuasion will be necessary to make a success of anything in the nature of a Co-operative Union.

12. Before leaving the subject of conditions of weaving in Madras the following remarks by Mr. Chatterton on the hand-loom industry, extracted from the Census-Report of 1911 (Chapter XII-‘ Occupation,’ part II-“ Industrial Occupation ”) may profitably be quoted although it refers primarily to the weaving of cotton — “ Through efforts fostered by Government there has been a marked development in the use of the fly-shuttle sley, which increases the output of each loom on an average by not less than 50 per cent. It is estimated that the total number is not less than 10 000, and indeed it is put at a very much higher figure than this by merchants engaged in the trade. A review of all the evidence available leads to the conclusion that the hand-loom industry is holding its own, and that the general increase in prosperity is leading to an increased demand for its finer products ” “ The condition of the hand-loom weavers is generally assumed to have steadily deteriorated owing to the effect of competition, and of indirect evidence there is plenty in support of this idea. The weavers themselves complain that their condition has become steadily worse, that they have to work harder and that now the coarse weavers, even by the most unremitting toil are only able to make a bare livelihood ’ Mr Chatterton then, after giving figures for the industry, goes on to say, “ I think, therefore, we may safely accept the following conclusion. That in the last 40 years the number of hand-loom weavers has remained practically stationary, but that owing to stress of competition they now turn out a larger amount of finished goods than was formerly the case, that is to say, the majority of them have to work harder to make a bare living. One might also add that their lot would probably be greatly improved if they could be induced to accept outside assistance, which can only be effectively rendered by the establishment of small hand-loom weaving factories. The individual weaver suffers because he is still trying to carry on a complex series of operations without recognition of the advantages of sub-division of labour ’ To this it may be added however, that where in the silk-industry such small factories exist—i.e., where small merchants employ a number of weavers under the present system—the condition of the weavers does not appear to be an enviable one, and the remedy appears rather to lie in the weavers assisting themselves by combining together to obtain the full fruits of their labour, than in their being combined under a single employer for the purpose of increasing his profits. The difficulties which lie in the way of such a scheme, however, have been exemplified in the case of the Conjeevaram Weavers Union.

CHAPTER III.

The Silk Trade of the Punjab and North-West Frontier Province.

RAW SILK

Imports

1 The Punjab receives practically the whole of its supplies of raw silk from China *via* Bombay and Karachi. A certain quantity is, however, imported from Yarkand and Bokhara by transfrontier routes, and a large amount of silk apparently passes through the Punjab on its way from Kashmir to the sea-coast. It is extremely difficult to arrive at a correct estimate of the amount actually consumed in the Punjab, owing to the confusion that exists with regard to the registration of this latter trade. Before 1906-07 the figures for the external land trade of the Punjab are of very little use, owing to frequent changes of the system of registration and the difficulties experienced in effecting it. In 1907 registration of the trade with Kashmir completely ceased, Kashmir being made a separate block in the returns of the Inland Trade of the Punjab. Before that date at least a certain portion of that trade was registered in the External Land Trade Reports of the North-West Frontier Province. After that date the bulk of the Kashmir trade ceased to be registered at all, for the Internal Trade Returns take account only of Railborne Trade, and the Kashmir trade is not railborne. The trade with Ladakh (Kashmir) and with Tibet was confused in 1907 and in that year registration of trade with Tibet ceased. Towards the end of the year, however, it was restarted, and in the following year the various trade-routes were first differentiated in the Returns. Until 1912-13 trade with Ladakh was registered on two routes, *viz.*, Sultanpur or Kulu and the Nachar Bhabeh and Baralacha Passes, after that date trade with Tibet only was registered by these routes and the figures for the trade with Central Asia *via* Ladakh (and apparently for part of the trade with Kashmir itself in silk) were obtained from Leh (in Ladakh). It is therefore almost impossible to disentangle the figures for the Kashmir trade (which merely passes through the Punjab on its way to the coast) from those for the trade with Yarkand and other places, silk from which is consumed in the province. The following table has been obtained by extracting the figures for the silk import trade given in the Returns for the External Land Trade of the North-West Frontier Province and combining them with those given in the similar Returns for the Punjab. It will serve to show how impossible it is to get a complete view of the trade during the last 10 years. —

Year	Imports of Raw Silk from	Into	Quantity in Mds
1905 06	Kashmir	N-W F P	68
	"	Punjab	3,954
	Ladakh	"	234
1906 07	Kashmir	"	4,691
	Ladakh	"	115
1907 08	"	"	181
1908 09	North and East Afghanistan <i>via</i> Khyber	N-W F P	43
	Ladakh <i>via</i> Sultanpur or Kulu	Punjab	67
1909 10	" " " "	"	110
1910 11	" " " "	"	93
	North and East Afghanistan <i>via</i> Khyber	N-W F P.	9

Year	Imports of Raw Silk from	Into	Quantity in Mds
1911-12	Ladakh <i>via</i> Sultanpur or Kulu . . .	Punjab	42
1912 13 .	" " " " . . .	" .	59
1913 14	Central Asia <i>via</i> Sultanpur or Kulu . . .	" .	61
	" " " Kashmir . . .	" .	1,047
1914 15 .	" " " " . . .	" .	1,138
	" " " Sultanpur or Kulu . . .	" .	3

From this table it is clear that the total exports of raw silk from Kashmir into the Punjab have not been registered since 1906-07, the figures for 1913-14 being apparently incomplete, for the quantity of Indian raw silk exported from the Punjab during that year was 2,975 maunds. The figure for 1914-15 may be complete, since only 979 maunds were exported from the Punjab during 1914-15. Furthermore, the figures given before 1907-08 must include (presumably) "waste" in "raw silk," but there is nothing to indicate in what proportion. I have unfortunately been unable to obtain reliable figures of the amounts annually exported from Kashmir, which might have aided greatly in clearing up the present confusion*. From a letter of the Deputy Commissioner of Rawalpindi, however, sent in the year 1904 to the Director of Agriculture, it appears that Kashmir raw silk goes by road to Rawalpindi and thence generally to Amritsar. It is said sometimes to return to Rawalpindi in the form of manufactured silk, but practically no Kashmir raw silk appears to be used in Amritsar at the present day. The bulk of the Kashmir silk must therefore be loaded at Rawalpindi (or some other station on the Punjab frontier) and transported direct to Karachi or Bombay Port. In the Returns for the Railborne Trade of the Punjab (which include the railborne trade of the North-West Frontier Province) we must expect to find a considerable amount of raw silk exported, which is not balanced by any similar import, although the Punjab is practically not a producing province. This is apparently the explanation of the large amount of silk recorded as "Indian Raw," which is annually exported to Karachi. The following figures, taken from these Returns, will illustrate this —

Imports and Exports of Raw Silk by Rail

Year	IMPORTS IN MDS.			EXPORTS IN MDS		
	Foreign.	Indian	TOTAL.	Foreign.	Indian.	TOTAL.
1905 06 . . .	4,367	308	4,675		1,611	1,611
1906-07	5,635	852	6,487	5	2,520	2,525
1907-08	4,856	394	5,250	2	4,121	4,123
1908 09 .	3,945	412	4,357	16	2,443	2,459
1909 10 .	4,774	187	4,961		2,443	2,443
1910 11	4,157	798	4,955		3,344	3,344
1911-12	4,812	312	5,124	4	3,238	3,242
1912-13	3,952	418	4,370	6	6,333	6,339
1913-14	4,312	128	4,440	5	2,975	2,980
1914 15	4,681	226	4,907		979	979

* Since writing the above, figures have been received for production in Kashmir during the last 10 years. These are given in the appendix at the end of this chapter. Mr. McNamara, Director of Sericulture, Kashmir State, writes—"The silk and cocoons are exported to France, and the silk waste is sent to London and enters India *via* Pindi. The goods are sent down *via* Kohala to Pindi, and therefrom they are railed down to Karachi, where they are shipped to Marseilles and London." No record is kept of the silk which enters Kashmir and is again re-exported.

Similar tables for 1913-14 and 1914-15 will read as follows —

Balance sheet of the Punjab trade in raw silk during 1913-14

Imports	Quantity in lbs	Exports	Quantity in lbs
By Transfrontier Route —		By Transfrontier Route —	
(a) Punjab	91,409	(a) Punjab	
(b) North West Frontier Province		(b) North West Frontier Province	7,912
By Rail —		By Rail —	
(a) Indian	10,750	(a) Indian	215,437
(b) Foreign	356,240	(b) Foreign	412
Total	458,299	Total	252,851

Balance-sheet of the Punjab trade in raw silk during 1914-15

Imports	Quantity in lbs	Exports	Quantity in lbs
By Transfrontier Route —		By Transfrontier Route —	
(a) Punjab	91,432	(a) Punjab	
(b) North West Frontier Province		(b) North West Frontier Province	22,505
By Rail —		By Rail —	
(a) Indian	18,645	(a) Indian	89,767
(b) Foreign	586,182	(b) Foreign	
Total	696,259	Total	104,262

In these cases however it would clearly be misleading to reckon the total consumption of raw silk in the province by deducting the exports from the imports as given above, for at least a considerable portion of the imports from Kashmir appear to have escaped registration as explained above. The only method by which a general idea of the quantity of silk actually consumed could be obtained would be to omit the figures for Indian silk on the export side of the account and deduct on the import side the amount registered as received *via* Kashmir, which is apparently mostly Kashmir silk. This in 1913-14 amounted to 1,047 maunds and in 1914-15 to 1138 maunds. The tables, as corrected thus, will be as follows —

Balance-sheet of the Punjab trade in raw silk during 1913-14

Imports	Quantity in lbs	Exports	Quantity in lbs
By Transfrontier	5,032	By Transfrontier	7,912
By Rail—		By Rail—	
(a) Indian	10,560	(a) Indian	
(b) Foreign	356,240	(b) Foreign	412
TOTAL	371,832	TOTAL	7,424
<i>Deduct Exports</i>	<i>7,424</i>		
Net Import	364,408		

Balance sheet of the Punjab trade in raw silk during 1914-15

Imports	Quantity in lbs	Exports	Quantity in lbs
By Transfrontier	247	By Transfrontier	23,595
By Rail—		By Rail—	
(a) Indian	18,645	(a) Indian	
(b) Foreign	386,182	(o) Foreign	
TOTAL	405,074	TOTAL	23,595
Deduct Exports	23,595		
Net Import	381,479		

This amount (*viz*, something under 400,000 lbs of raw silk) may be taken as the quantity actually consumed in the province. The figure given above for 1888-89 is rather higher, as are those given in the Monograph on the Silk Industry of the Punjab, published in 1899, for the years 1889-90 to 1898-99, calculated on the same basis as the above tables —

	Rs
1889-90	4,74,080
1890-91	4,28,320
1891-92	5,63,280
1892-93	4,22,320
1893-94	4,82,720
1894-95	4,61,760
1895-96	5,71,520
1896-97	5,70,480
1897-98	5,46,840
1898-99	5,91,520

If these figures are correct, it appears that considerably less silk is used by the province than was formerly the case. This is probably correct. It is generally stated in the silk-centres of the province that less weaving is done now than in former years, and the census figures support this conclusion. The total number of weavers and spinners of silk in 1911 is given as 13,302, whereas the number of silk carders, spinners and weavers, and makers of silk braid and thread was in 1901 13,370. It is therefore probably a fact that the amount of weaving done in the province has been decreasing during the last 10 or 15 years. A comparison of the figures for the years 1888-89 and 1913-14 will show that the import of foreign raw silk is now much what it was then (though it appears to have risen considerably between 1889 and 1898) and that it is in the import of the Indian material that the decrease is manifested. It is certainly the fact that at the present day hardly any Indian raw silk is used in the silk centres of the Punjab. This used not to be the case. Geoghegan, writing in 1880,* mentions the following sources of supply of raw silk, *viz*, Kokand, Bokhara, Balkh, Khulm, Akcha, Shibberghaum, Andkho, Cashmere, Bengal, and China *via* Bombay. Twelve kinds of silk are mentioned as being imported from Bengal, the prices varying from Rs 2-8 to Rs 5

*"Silk in India" by J. Geoghegan, page 93

a seer and the following figures are quoted as purporting to give the importations into the Punjab in maunds of 100 lbs —

Sumbut year	Khorasan	Bengal	TOTAL
(1841) 1850	709	1,615	2,324
1850	1,825	926	2,751
1851	1,000	973	2,063
1852	66	709	765
1853	989	657	1,647
1854	701	394	1,095
1855	.	232	232

The low figures for the (Sumbut) years 1852 and 1855 are explained as due to the Punjab wars. If these figures are trustworthy two conclusions can be drawn. viz (1) that Bengal silk was at that time very largely used in the province and (2) that the import of such silk was even at that time manifesting a very serious decline. Figures for the imports in 1852 are also given, as follows —

From—	Rs
China	24,66,605
Bengal	13,35,951
Other Countries	34,45,448

but reasons are appended for the belief that there is some radical error in these figures, the silk trade being valued only at £200,000. In the same work Mr Cope is quoted as the authority for the following estimates.—At Amritsar the import of Bokhara silk in 1857 amounted to 675 maunds, of which 250 maunds were re-exported. The local manufacture employed 2205 persons yielding goods valued at nearly Rs 3½ lakhs. The same city also imported 1,148 maunds of Bengal silk at Re 1-8 to Rs 2-8 per seer, all but 80 maunds being consumed in the city, and producing goods valued at nearly Rs 4 lakhs. Jullundhar is said to have imported 800 maunds yearly of which 75 maunds were woven on the spot and the rest re-exported. Of the total supply $\frac{5}{8}$ are said to have come from China *via* Bombay, $\frac{2}{8}$ from Bengal and $\frac{1}{8}$ from the westward. It will be noticed that the price of the Bengal silk is very low and Geoghegan concludes that only the worst kind of Bengal silk was imported into the Punjab. This may in part account for its failure in that province. Imports by rail of Chinese raw silk from Bombay during the year 1870-1871 are given as follows —

To—	lbs
Amrit-sur	35,424
Jullundhar	25,584
Delhi	4,674
Lahore	574
Mooltan	328
TOTAL	66,584

During the same year Amritsar sent to Bombay 21 156 lbs. and Multan 574 lbs of raw silk presumably imported from Turkistan or Afghanistan. Liotard's writing in 1883 adds the following observations and figures —

The raw material continues to be obtained from Central Asia Kashmir Bengal and China and to be manufactured in Multan, Lahore Bahawalpur Amritsar Jullundhar and Delhi. Amritsar seems to be losing its position as one of the chief centres of the Silk trade in the Punjab. The

two following tables show the figures of the sale and local consumption of silk and of floss and waste silk used in the district from 1869 to 1881 —

Sale and Local Consumption of raw silk at the Amritsar City from 1869 to 1875

Years	GROSS SALE		LOCAL CONSUMPTION		REMARKS
	Weight	Value	Weight	Value	
	Mds	Rs	Mds	Rs	
1869	2,768	18,39,360	50	64 000	
1870	2,370	15,16,032	55	71,400	
1871	2,026	12,96,640	60	76,800	
1872	2 480	16,54,400	45	58 600	
1873	2,346	14,83,056	50	64 000	
1874	2,372	15,18,080	100	1 28 000	
1875	3,112	20,55,680	125	1,60 000	
1876	4,202	26,89,280	100	1,28,000	
1877	4,052	25,93,280	100	1 28,000	
1878	1,975	12,64,000	75	96,000	The falling off was due to the closure of the route to Bokhara owing to the Afghan war and to the prevalence of sickness during the year 1881 The figures of 1882 and 1883 are not available
1879	1,737	11,11,680	55	70,400	
1880	2 372	15,18,080	50	64 000	
1881	1 486	10,85,440	30	38,400	

Quantity of floss and chussam silk used in the City of Amritsar and adjoining villages

Years.	GROSS SALE		LOCAL CONSUMPTION		REMARKS
	Weight	Value	Weight	Value	
	Mds	Rs.	Mds	Rs	
1869	1,325	12,61 000	150	1,02,000	
1870	1 130	11,24,900	160	1 08,800	
1871	1 100	10 48 000	165	1,12 200	
1872	1,075	10 01,000	150	1,02 000	
1873	1 045	9 95 600	150	1 02,000	
1874	1,030	10,14,000	150	1 02 000	
1875	1,195	11,12 600	165	1,12 200	
1876	1 145	10 63,600	50	34 000	
1877	1 150	10,82 000	50	34 000	
1878	1 075	10 10,000	45	30 000	
1879	1,285	12,48,800	45	30 000	
1880	1 500	1 44 000	40	27 200	
1881	600	5 88 000	25	17 000	The figures of 1882 and 1883 are not available

During the last quarter of a century imports from the westward appear to have steadily decreased while imports from China *via* Bombay have steadily risen. Meanwhile the imports of Indian silk have dwindled almost to nothing. It has already been seen that in 1888-89 (*vide* table on page 57) these amounted to 111,127 lbs, whereas in 1913-14 they had fallen to 10,560 lbs. The following table will show the sources of this import trade —

Railborne imports of Indian raw silk into the Punjab

Whence imported	1911-12		1912-13		1913-14.	
	lbs	Rs	lbs	Rs	lbs	Rs.
Karachi	19,720	92,065	18,307	85,898	3,630	15,853
Bengal	3,052	12,605	3,052	24,012	2,722	21,501
United Provinces			11,056	53,600		
Others	2,970	12,115	1,980	9,314	4,208	22,236
TOTAL	25,742	1,16,785	34,485	1,72,824	10,560	59,645

I am unable to suggest what kind of silk it is that was imported during these years from Karachi and other places, and from the United Provinces in 1912-13. Bengal silk appears to be known as "Ghungru" or "Desouri," and the latter is said to be used as a warp with a weft of Yarkand silk in Amritsar, but I found none whatsoever in use and was told that none had been received for the last seven or eight years. Similarly, "desouri" was known in Peshawar, but was said not to be used now-a-days, and none seems to be received in Multan. Mysore silk is unknown, it appears, in this province, so that the nature of the small quantities of silk mentioned in the above table must remain doubtful. It is sufficiently clear, however, that foreign raw silk is now almost universally used throughout the Punjab.

3 The Monograph on the Silk Industry of the Punjab gives a list of the classes of silk imported for manufacture in 1899. These are as follows —

- 1 *Wardan* — A name applied to best Central Asian silk. Price Rs 12 to Rs 18 according to quality and place of sale.
- 2 *Mar, Mayee or Phul* — A name chiefly given to China silk imported from Bombay *via* Amritsar. Price Rs 11 to Rs 17.
- 3 *Akhcha* — From Balkh. Rs 15 a seer at Peshawar.
- 4 *Attyan* — A China silk imported from Bombay. Rs 15 a seer at Peshawar.
- 5 *Nawabi* — From Bokhara. Rs 12-8 at Kohat and Rs 14 at Peshawar.
- 6 *Lab-i-abi* — Produced in the country bordering on the Oxus and in Samarkand. Sells for Rs 14 a seer in Peshawar.
- 7 *Shahr-i-sabzi* — A Samarkand silk.
- 8 *Waran* — A Bengal silk. Sells for Rs 13 or less according to quality.
- 9 *Namkani* — A Central Asian silk. Sells for Rs 13 a seer at Peshawar.
- 10 *Charikh* — A Bokharan variety. Rs 11 or Rs 12 a seer.
- 11 *Ghungru* — A Bengal silk from Rampur. Sells for Rs 8 to Rs 11 according to quality.
- 12 *Baf Kandahari* and *Baf Yarkandi* — Sells at Amritsar at Rs 12 and Rs 12-8 a seer.
- 13 *Kakra* — A Hongkong silk. Rs 11 a seer.
- 14 *Sultani* — A Hongkong silk. Rs 11 a seer.

- 15 *Behrámpuri*—Produced in Gurdaspur District The outturn is said to be 2 or 3 maunds per annum The silk sells at Rs 13 a seer at Amritsar
- 16 *Dukhi*—A Bokhari silk used in embroidery Sold at Rs 11 a seer in Peshawar
- 17 *Kattar*—A China silk imported via Bombay
- 18 *Dutara, Ektara, Lani Maktil, Kattar*—Bengal silks from Balli Sell at Rs 7 to Rs 9 a seer
- 19 *Manchu*—A Hongkong silk
- 20 *Maithia*—Hongkong silk Rs 3-8 to Rs 5-2 a seer according to place of sale A rough silk used on the frontier for embroidery
- 21 *Sika or Sikha or Sikhapuri*—Imported from Singapore Rs 4 or Rs 4-10 a seer A coarse silk used down country and on the frontier for embroidery
- 22 *Shishmahal or Shishmal*—A Hongkong silk of inferior quality costing about Rs 3 to Rs 4 a seer
- 23 *Arewa*—A coarse Yarkandi silk costing about Rs 4 a seer
- 24 *Chap, Goia, Lani Maktil, Lani Chapperi, Kachar, Khambandi, Ladua, Lambi Bandi, Radha Nagri, Aterian*—These are all Indian silks of inferior quality, costing from Rs 4 a seer downwards, and used in making azarbands, etc
- 25 *Dari*—Silk mixed with flax from Italy

Since that date there have been considerable changes in the kinds of silk imported into the Punjab Now-a-days many of the kinds mentioned in this list appear to be unknown even by name, and others are known by name but are no longer used in the province Nos 1, 3 to 10, 13, 16, 17, 19, 22, 24 and 25 in the above list belong to these categories, in the case of most of these even their name has apparently been forgotten *Báf Kandahári* is also, it appears, no longer imported Of the remaining kinds the Bengal silk (*Ghungru*) is known by name, but is very little used at the present day In Multan it is said that Bengal silk is known as *ektára*, *dutára*, etc, according to the number of threads, so that *ektára*, etc, do not appear to be different varieties of silk from that which is called *Ghungru*, but different qualities of that kind of silk The silk is said to be a good one but only coarse qualities reach Multan, and that only every three or four years In Amritsar, as has been mentioned above, no such silk has apparently been imported for several years *Behrámpuri*, or Gurdaspur silk, is still produced in small quantities, but it is said to be too fine for the ordinary coarse local weaving, though there is said to be some demand for silk of this quality in Lahore Two persons in Amritsar deal in this silk, which is sold at Benares but the outturn in 1915 was said to be only four maunds Sheikh Ghulam Sadíq, of Amritsar, employs some 15 basins there for the reeling of this silk, but this industry is unimportant from the trade point of view, inasmuch as the reelers are only temporarily employed for that purpose and are ordinarily employed in the adjoining carpet-factory If produced in sufficient quantity, however, there would certainly be a market for this silk in France,—at present the outturn is far too limited for any European concern to take it up

Sultáni is still used occasionally, but very seldom, in Amritsar and in Multan Its price is said to be Rs 11 to Rs 13 according to quality, but I was informed that it could only be used for *Dari* and not (like *Mar Phul*) for other articles I have not been able to find it actually in use, however, anywhere in these provinces, so that I am unable to vouch for the correctness of this information, or to suggest what kind of China silk is really meant, "*Sultáni*" being evidently only a local appellation The only remaining kinds mentioned in the Monograph are *Mar*, *Mayee* or *Phul*, *Maithia*, *Sikha*, *Arewá* and *Báf Yárkandi* All of these are still in use Under the name *Mar*, *Mayee* or *Phul* are included two kinds of Chinese silk,—viz, Meang and Hoing, the former being known as *Mar* or *Mar-phul* and the latter as *Phul* The local names are apparently corruptions of the Chinese names, variations being

mayung and *fuyung*, which are nearer the originals, Hoing being also known as *wooying*, *hoying*, and so on. Both these kinds of silk are in very common use in the Punjab and North-West Frontier Province, being apparently the only Shanghai silks imported. They are yellow varieties from North China, and are used in greater quantity in Amritsar than any other kind of raw silk except that from Yárkand. In Multan *Mar-phul* (Meang) is the kind of silk most commonly employed, Hoing being also used in large quantities. In Amritsar the price of these silks is said to have risen recently from Rs 15 to Rs 19, in Multan it is given as only Rs 13 (presumably before the rise in price), an inferior quality being probably in use. Meang is also known as 'Achka,' *ie*, H K or Hsing Kee, a chop of Meang containing four qualities. The sample which I obtained in Multan was of No 4 quality, which explains the comparative lowness of price. The 'Gold Moon' chop of Hoing is the kind which appears to be most in use in that city. In Peshawar the only kind of Shanghai silk in use is imported from Amritsar, and costs Rs 18 for a Peshawari seer (*ie*, Rs 14 a seer). This silk is Lie-Meang, or low quality Meang, and is very coarse and uneven. *Methra* (*Marthra*) and *Susa* are different qualities of the coarse Canton silk known as panjam, and imported from Hongkong. They cost Rs 4 to Rs 4-8, and Rs 4 per seer respectively, and are sold in Amritsar in large quantities, always being dyed there before sale. They go chiefly to Peshawar, Rawalpindi, etc., where they are used for the manufacture of turbans, lungis, etc., and as thread for embroidery. *Sikka* (or *Sikka*) is also much used. It is a coarse yellow silk from Singapore, and costs, in Amritsar, Rs 3 to Rs 7 according to quality.

The only remaining kinds mentioned in the Punjab Monograph are *Báf Yárkandi* and *Arewá*. Both of these come from Yáikand. There are at least four kinds of Yárkand silk found in Amritsar, *viz*, (1) *kotha* (known as *Báf Yárkandi* in Multan). This is used most of all and costs Rs 10 to Rs 12 a seer. (2) *tán* (*ie*, warp) so called because it is supplied ready warped. It is used less than *kotha* and costs Rs 17 a seer. (3) *wattal*, costing Rs 13 a seer. It is the same as *kotha* but of superior quality and twisted. (4) *arewa*, a kind very little used. It formerly cost Rs 8 a seer, but is now said to sell at Rs 7. Altogether Yarkand silk to the value of Rs 6 lakhs or Rs 7 lakhs is estimated to be sold in Amritsar every year. Of the total amount of Yarkand and Chinese silk sold three-quarters are said to be the former and only one quarter the latter kind. The popularity of the Yarkand silk is ascribed to the fact that it is very easy to use, as it unwinds at once and without difficulty, and contains very little waste. *Báf Yárkandi* is also very largely used in Multan and in Peshawar. In Peshawar it costs Rs 15 a seer, being obtained from Amritsar. The whole of it is said to be windable, containing no absolute waste.

Besides these kinds, Bokhara silk is still used in considerable quantity in Multan, where the price has fallen from Rs 26 to Rs 20 per seer. It is a silk of a dirty white colour, very similar in appearance to the Yárkand variety, but much finer and softer than *Báf Yárkandi*, and is used both for warp and for weft. In Amritsar this silk is not much in demand, owing to its high price, and it is said not to have been supplied there for many years. In Peshawar, also, it appears to be very little used now for the same reason, in fact the only kinds of silk commonly in use in that town are (1) China silk (Lie-Meang), (2) *Báf Yárkandi*, and (3) *tuti* or spun silk from Switzerland. The nature of the import trade in Bokhára and Yárkand silk will be considered later.

Spun silk is used in great quantity in these provinces, being distributed from Amritsar. The kinds imported and the purposes for which they are used have, however, been fully dealt with elsewhere,* and nothing more need be added in this place, except to state that the demand for ready-made warps seems to be on the increase.

4 In addition to silk, silk substitutes are extensively used in the Punjab. Artificial silk imported from Bombay goes in large quantities to Amritsar, but is apparently not used in Multan or in Peshawar. It is known as

"*Chamak*," from its appearance, and costs Rs 7 per lb, the price having risen from Rs 4 on account of the war. Details of this trade will be found on page 86. Mercerised cotton is used in most of the weaving centres. In Amritsar it is greatly employed for suitings and is obtained either from Japan or from England *via* Bombay. The latter is said to have ceased to arrive, on account of the war, but was formerly obtained from Graham & Co, Glasgow, in warps at Rs 7 a bundle. The Japanese material (from the Fujigasu Spinning Co) at Rs 12-8 for 5 seers,^{*} is, however, said to have been more generally used. Mercerised cotton, purporting to be English but re-labelled by the Bombay agents is now being received. This is greyish in colour and for that reason preferred to the Japanese material, but otherwise it is said not to be superior, and it is conjectured locally that this also is Japanese material, sold as English because Re 1 or Rs 2 more was obtained for the real English article. In Multan also, both Japanese and English mercerised cotton is found. It is called "*nagli*" and is imported from Bombay both white and dyed. A *tani* (warp) of 58 yards is said to cost Rs 5, and plain mercerised cotton cloth sells at seven annas a yard. The dye is found not to be fast. The merchants of Peshawar obtain it from Amritsar, but it is only used for making *azarbands* and *pandis*. Its price is reported to be Rs 13 a Peshawari seer (*i.e.* Rs 10-8 a standard seer) for the white yarn and Rs 14 a Peshawari seer (*i.e.* Rs 11-8 a standard seer) dyed, but this must be a mistake, unless prices have risen recently to an enormous extent, for according to the values assigned in the Customs returns the price in 1914-15 averaged from about Re 1-8 to about Rs 2-8 a lb. In spite of the very general use of these substitutes, however, they are not at present used in anything approaching the same amount as silk in Amritsar for example. Yarkand silk is estimated to be sold in far greater quantity than any other kind, and after Yarkand Shanghai silk (*Meana* and *Homa*). After these two, the other kinds are sold in the following order of quantity:—(1) Canton silk (*Mcina* and *Susa*) (2) Singapore silk (*Sikka*) (3) spun silk (*tuti*), (4) mercerised cotton and (5) artificial silk. A reference to the Seaborne Trade Returns, however, (*vide* pages 85 and 86) will show that the imports of the two last mentioned articles are by no means inconsiderable.

5 The trade in Yarkand and Bokhara silk is carried on in the following ways. Yarkand and Khotan silk is brought on ponies to Amritsar *via* the Gilgit route and Kashmir by up-country merchants, who purchase it locally in Eastern Turkestan, where it is produced. They deposit the silk with one of the three or four firms of commission agents in the town and receive an advance of 50 per cent to 75 per cent of the value. Merchants of Amritsar and other towns come to these agents, accompanied by one of the local brokers, and with the help of these the price is settled. The agents are said to receive Rs 2-0-6 per Rs 100 value, or about 2 per cent commission, the brokers getting about 1 per cent. In both cases it appears to be the sellers who pay the commission, the merchants paying nothing to the brokers. The number of middlemen appears to be unnecessarily large in these transactions. It is stated, indeed, that the brokers are indispensable, for if a merchant tried to buy his material without their aid he would fail to obtain it when he needed to sell and these brokers are said to keep themselves up-to-date in knowledge of prices, the state of the market and all details of the trade. There certainly appears, however, to be an opening for co-operation here among the merchants or employers of weavers for the elimination of unnecessary commissions. Yarkand silk is said to arrive once a year—generally about December and January—and is never brought on order. A few Indian merchants of Hoshiarpur go themselves to Yarkand to buy the silk there.

This is said to be the system in vogue in Amritsar. In Multan Bokhara silk is apparently brought by Pathans to the *dalals* or brokers (of whom there are about 50). They leave the material with these brokers and obtain the price when they return in the following year. No mention is made of any advance, but some amount must obviously be obtained. The *dalals* receive brokerage not only from the Pathans but also from the merchants who are said to pay $\frac{1}{2}$ per cent. Yarkand silk is brought similarly though the

^{*} If this is correct, prices have risen about 100 per cent.

Amritsar system is also reported to be in vogue Bokhara silk is also received in Peshawar down the Khyber route It is not much worked in that town, however, and is mostly exported in bulk to Amritsar and Multan China and other silks are obtained from Bombay by the employers of weavers, or factory owners, through their agents in that city

Industrial Methods

6 Having obtained their raw material by one of these methods the merchants or employers of weavers make it over to the weavers themselves In Amritsar City a kind of factory system is followed There are about a dozen factory-owners,* each employing from 15 to 200 looms The weavers generally work in the factories, being as usual paid by the piece They are said to make 8 to 10 annas a day, receiving, it is alleged, Rs 30 to Rs 32 per 100 yards The weavers who live in the district, on the other hand, beyond the limits of the city, come in to the merchants or employers for yarn and take it away to their villages, where they manufacture it into cloth The number of weavers in Amritsar City is estimated at about 600, although 10 years ago there were as many as 1,700 persons so employed In addition to these about 100 persons are now said to be engaged on dyeing, and a certain number must also be employed for twisting and other preparatory processes If we compare the number of persons, however, said to have been employed in 1851 on the local manufacture, viz, 2,205, it is clear that the silk-manufacturing industry of Amritsar has very seriously declined

In Multan the factory system does not seem to prevail, at any rate to the same extent as in Amritsar Here there are said to be about 20 merchants who give out the silk yarn to the weavers, paying from Rs 12 to Rs 20 for 40 yards (30 Multani yards) of woven cloth The weavers work in their own houses, some of them even employing servants for the purpose, and they make 12 annas to Re 1 a day They take advances from their employers when they receive the yarn, sometimes amounting to practically the whole value of their work Thus one weaver, who had received spun silk for manufacture was to get Rs 12 for 50 yards of 27 inches, and had taken an advance of Rs 11 at the time of obtaining the raw material Under this system the weavers appear to be better paid than under the factory system prevailing in Amritsar There are 400 to 500 persons employed in weaving in Multan City, 60 to 80 other persons being employed on twisting, and about 50 on dyeing In Peshawar City only 40 persons are said to be engaged on weaving and only about 50 persons on other processes of silk manufacture, viz, dyeing, twisting, etc These persons are employed by the proprietors of the looms and of the dyeing-vats, the weavers receiving 4 annas a yard, thereby earning 6 to 8 annas a day

In Multan German aniline dyes are used The dyers formerly received 14 annas a seer, but now, owing to the great rise in the price of dyes, they get as much as Re 1-12 or Rs 2 a seer In Amritsar I found Swiss dye in use for dyeing *daryan* of Yarkand silk This cost formerly 11 or 12 annas a tin, but owing to the war the price rose as high as Rs 13 Recently, on account of a rumour that cheaper dyes were arriving from Japan the price fell to Rs 8 8 a tin Very large sums have consequently been made by the fortunate owners of stocks of dye-stuffs at the outbreak of the war Dyes are exempted from octroi-duty in Amritsar it being found that far more of this material was being used there than in Lahore The cost of dyeing has risen here also from Re 1 or less to Rs 2 a seer

On most of the looms in the Punjab only coarse weaving appears to be done In Amritsar still the centre of the silk trade, it is said that the weavers are now incapable of anything else The dyes used are very frequently not fast and the raw material as has been seen is to a considerable extent inferior silk or silk substitutes The dyes are largely used for riband- or other articles of the same nature which are not ordinarily washed, and it is possible that the degeneration of weaving has followed upon the use of

* The names of the factory-owners are given in the Appendix to this report.

inferior dyes There is a great demand for the coarse cloth which is commonly woven, and the finer qualities are now almost all supplied from other provinces or from foreign countries The outturn of cloth is, however, still considerable One factory in Amritsar is said to manufacture Rs 6 or Rs 7 lakhs' worth of silk goods, exporting them to other cities in the Punjab, such as Sialkot, Gujranwala and Rawalpindi, or to Peshawar The Kashmir Weaving Co manufactures silk cloth to the value of Rs 11,000 or Rs 12,000 annually, though this has fallen to Rs 7,000 or Rs 8,000 recently In Multan one kind of silk is generally used for the warp and another for the weft No goods are ever manufactured, apparently, with warp and weft both of China silk Cloth made of a Bokhara warp with a weft of Hoing sells for Rs 2-2 to Rs 3 a yard, made of a spun-silk warp and a Hoing weft it fetches Rs 2 a yard, and articles manufactured from a spun-silk warp with a Bokhara weft realize Re 1-5 or 1-6 a yard Spun silk is also combined with cotton, or mercerised cotton alone is used In Peshawar all the weaving is of plain cloth, handkerchiefs, and the like, the patterns being very simple, a standard check or similar design Lungis appear always to be woven with a weft of Chinese silk on a warp of cotton, and the price is only 14 annas to Re 1 a yard A handkerchief of Chinese silk fetches about Re 1

This degeneration of local weaving is certainly not due to any lack of a demand for finer silk manufactures A reference to the figures for imports of silk goods into the province will dispose at once of such an assumption From these it will be seen that a very large quantity of manufactured silk is brought into the Punjab, which the local silk industry is, under the present conditions, unable to supply Certain steps have, of course, been taken on behalf of the weaving industry Schools have been established but not apparently with any considerable amount of success In Multan there is a weaving master receiving Rs 30 a month from the Municipality He was sent to the Ludhiana school for training and has been employed for the last couple of years In the school there are two ordinary pit-looms and the common appliances for winding, etc Only plain weaving can be taught, though the Municipality is, I believe, intending to supply the school with better looms In this school the sons of artizans are taught free of charge I am not able to see any particular use for a school of this nature All that can be taught in the school could apparently be learnt equally well—and perhaps better—in the boys' homes, where their fathers are continually at work on looms of the same kind It really appears that the boys are sent to the school rather to keep them out of mischief than for any other purpose Could it be proved to the weaving community that there is an enormous demand for various kinds of fine silk, and could they be shown by qualified instructors at a suitably-equipped school how to manufacture silk cloth of that nature, the advantage of the institution would be at once apparent It is, of course, a matter for the decision of the local authorities, but I should imagine that were such a school established, its benefits would be more appreciated if a fee were charged for the instruction received, when once it had been demonstrated, by actual manufacture and sale of the articles, that profit was to be made by the new method It would of course require careful consideration of the market, and expert advice as to the best appliances for manufacturing the required articles, before it would be possible to demonstrate successfully that goods now received from abroad could be manufactured locally, but it is only after such consideration and with such advice that any serious effort can be made to regenerate weaving in these provinces Were such a regeneration successfully accomplished, however, it would still remain to be seen whether the weaving community would gain by the change, or whether all enhanced profit would go to the employer or factory-owner In the Madras Province, where improved looms have been established, there does not appear to have been much appreciable gain to the weavers themselves, and where the factory system prevails, as in Amritsar city it is probable that the result would be the same Where however as in Multan or in Amritsar district, the weavers take the yarn to their own houses for manufacturing upon their own looms, an improved loom, increasing the output or lessening the amount of labour required, should certainly enhance the profits of the weaver himself A co-operative society of weavers, upon the lines of that of Conjeeveram in the Madras Presidency, might be successful

There has therefore been a very considerable increase in this export trade, which consists probably of Chinese raw silk * Improvements in the system of registration may be partially responsible for the increase, but the trade carried by the Tochi route appears to be steadily growing and the high figure reached in 1914-15 is especially noticeable Kabul is said to import Chinese raw silk from Peshawar and this trade must be included in the above figures.

The transfrontier export trade of the Punjab in raw silk is of no particular interest There was a small export to Kashmir until 1906-07, but since that date this trade has either ceased or has escaped registration under the new system

SILK MANUFACTURES

8 The Punjab draws very heavily upon foreign countries for its supply of manufactured silk From the middle of last century until recent years the import of foreign goods seems to have steadily increased, while local produce declined The import of Indian manufactured goods has also steadily decreased within the last 10 years, falling from 1,763 maunds, valued at Rs 12½ lakhs, in 1905-06, to 217 maunds, valued at Rs 2 lakhs, in 1913-14, and only 4 maunds in 1914-15 During the same period foreign imports have remained steady until 1914-15, when (presumably on account of the war) they fell from 1,907 maunds in 1913-14 to 877 maunds in 1914-15 The following table, giving the imports of silk piece-goods into the Punjab by rail during the last 10 years, will illustrate these remarks —

Imports of silk piece-goods into the Punjab by rail

Year	FOREIGN		INDIAN		TOTAL	
	Mds	Rs lakhs	Mds	Rs lakhs.	Mds	Rs. lakhs
1905 06	1,544	5½	1,763	12½	3,307	18
1906 07	1,248	4½	1,553	10½	2,801	15½
1907 08	2,278	24½	594	4½	2,872	28½
1908 09	1,406	5½	269	2	1,675	7½
1909 10	1,849	6½	251	2	2,100	8½
1910 11	2,128	7½	643	6½	2,771	13½
1911-12	1,992	6½	817	11	2,809	17½
1912-13	1,510	4½	614	5	2,124	9½
1913 14	1,907	6½	217	2	2,124	8½
1914-15	877	3	4		881	3

The values given above are those assigned in the Railborne Trade Reports They cannot be accepted implicitly, for the variations from year to year are so great as to raise considerable doubt as to their accuracy However, according to these values the average yearly import of silk goods into the Punjab amounts to about Rs 13 lakhs It will be noticed that in 1905-06 and 1906-07 the Indian silk imports outweighed the foreign, whereas since that date they have in no case reached half the amount of the latter The foreign imports are nearly all from Bombay, a small quantity only being received from Karachi and Calcutta The accompanying table shows the

* This is confirmed by subsequent enquiries The Political Agent, Tochi, reports that the raw silk exported to Afghanistan via the Tochi route is China silk of poor quality from Amritsar

of Japanese, in addition to Indian manufactures worth Rs $\frac{1}{2}$ lakh from Bengal, and the same amount from Benares. According to this merchant, although the Chinese goods are the best the Japanese are sold in the greatest quantity, though the latter frequently do not come up to sample. The most valuable asset of the Japanese goods is their finish. It is said that plain Benares silk and plain Japanese silk of the same quality cost Re 1-4 and Re 1-12 a yard respectively, but that in spite of the higher price the Japanese article is preferred, solely on account of its superior finish. This is the case even though the Benares article is popularly supposed to be pure silk, whereas the Japanese goods are under suspicion. Benares silk is however sold in very considerable quantities, especially schappe and plain silk at Rs 20 for 12 yards, which is said to be much used instead of the locally-woven *daryar*. Benares *khappans* (cloth for covering the bodies of the dead) are also sold in Amritsar. They are made of stiff thick silk and cost Rs 3 for $3\frac{1}{2}$ yards.

In Multan Japanese silk cloth sells at 12 annas to Rs 2-8 a yard, according to quality. It is imported *via* Bombay. Handkerchiefs of Japanese silk can be purchased in the bazar for as little as 3 annas each. Delhi is, however, the chief centre of this trade. In that city no weaving now appears to be done, but very large quantities of imported silk goods are sold. In 1913-14 out of a total import by rail of 2,124 maunds of silk piece-goods into the Punjab, 1,286 maunds went to Delhi City, 753 maunds (or practically the whole of the remainder) going to the territory between the Sutlej and the Jhelum, which includes Amritsar, Lahore, and Multan. In 1912-13, when the total import into the Punjab was exactly the same as in 1913-14, the proportions were very similar. The leading merchants in Delhi appear to specialize, *i.e.*, one imports only European piece-goods, another only Japanese and Chinese, and a third only Benares goods. It will therefore be convenient to treat each of these lines of import separately.

1 *European piece-goods*—The largest trade is in mixed goods from France, but there is also considerable demand for plain or embroidered satin and damask from Switzerland, France, and Italy. Silk flowered grenadines are imported from Switzerland. These are made of cotton embroidered with silk flowers, and sell at Re 1-4 per yard of 50 inch width. Many kinds of cheap French mixed goods are sold—cotton shot with silk costs 13 annas per yard of 32 inch width, cotton striped with silk 9 annas per yard of 18 inch width, and plain green silk sells at 12 annas for a yard of 13 inch width. Green silk cloth from Switzerland is made in 16 inch widths and costs Re 1 per yard. Austrian mixed goods are also sold; these are of cotton embroidered with flowers of cheap silk and imitation gold thread. Their price is from Rs 3-8 to Rs 6-4 for a piece of $2\frac{1}{2}$ yards by 48 inches.

2 *Chinese and Japanese goods*—The Japanese manufactures are mostly conspicuous for gaudy patterns and brilliant finish. All kinds are imported, from plain cloth (generally of bright colour) to silk embroidered with flowers and with printed colours, but almost without exception the cloth is finished with a gloss and smoothness which appear to appeal particularly to the public taste in the Punjab. The only goods from the Bombay Mills which I found in Delhi were *saris*, and these are not much in demand, the ordinary wear being petticoats (*lenga*), which are generally made from Japanese, European, or sometimes Benares cloth. The goods from the Mills are said to cost more and to have less sheen. Dull effects are considered common, brighter colours and pronounced patterns being therefore preferred. It is said that Japanese cloth is dyed with brilliant colours in the Bombay Mills and that this kind of cloth is much in demand. For men's clothes Chinese plain cloth (apparently manufactured from wild silk) is very popular, and much worn by all classes. This sells for Re 1-8 a yard of 27 inches in one quality and Re 1-2 a yard of 20

demand and appears to be rapidly dying out. It is possible, though perhaps not altogether likely, that the present increase in demand for silk substitutes will disappear, as it disappeared after a very short life in the Madras Presidency. There is very little chance, however, of any change in the present taste for lustre and finish, and unless and until goods of Indian manufacture can rival the Japanese articles in these points, there is very small likelihood of an increase in the demand for Indian manufactured silk in these Provinces.

11. The export trade in silk manufactures is small, the whole amount carried by rail averaging during the last 10 years, according to the value rates assigned, less than Rs 1 lakh annually. It consists mainly of small consignments of piece-goods to the United Provinces and elsewhere. The following tables show the total exports by rail during the last 10 years, and details as to the provinces of consignment for the last five years —

Exports of silk piece-goods from the Punjab by rail

Year	Foreign.	Indian	TOTAL	
	Mds.	Mds.	Mds.	Rs.
1905 06	2	24	26	16,370
1906 07	2	36	38	23,297
1907 08	3	377	380	2,19,532
1908 09	2	174	176	1,03,049
1909 10	15	186	201	1,27,166
1910 11	30	153	183	1,27,936
1911-12	5	59	64	41,129
1912 13	43	88	131	1,06,828
1913 14	8	59	67	45,199
1914 15	2	110	112	70,586

Exports of Indian silk piece-goods by rail

Whither exported	1910 11	1911-12	1912 13	1913 14	1914 15
	Mds.	Mds.	Mds.	Mds.	Mds.
Bombay Port	87				
United Provinces	30		67		70
Madras		25			
Sind					33
Karachi				28	
Others	36	34	21	31	7
TOTAL	153	59	88	59	110

There is also a small export trade by transfrontier routes both from the Punjab and the North-West Frontier Province. From the latter goods are exported by way of Khajuri Kach to Afghanistan. In 1903 04 an export of 22 maunds valued at Rs 17,600, is mentioned in the Trade Returns but in that year until 1911-12 no further trade of this nature is recorded. From

1911-12 to 1913-14 only 28 maunds, valued at about Rs 14,500, were registered, and in 1914-15 again no such export was recorded. Exports across the Punjab frontier are larger. A small trade with Kashmir, Ladakh, and Chinese Tibet was registered between 1903-04 and 1912-13. The system of registration was then changed, and figures for the trade with Central Asia were obtained from Leh, including for the first time trade which passed *via* Kashmir and the Rawalpindi route. That a considerable amount of exports had previously escaped registration is proved by the fact that in 1913-14 25 maunds of silk manufactures are reported to have been exported over the frontier *via* Kulu or Sultanpur, and 231 maunds *via* Kashmir, of a total value of nearly Rs 4 lakhs. In 1914-15 exports *via* Kashmir amounted to 477 maunds, valued at over Rs 2½ lakhs, and a small quantity was sent to Chinese Tibet. The nature of the silk manufactures exported in this way I have not been able to determine.

12 A table is appended showing the sources of the import and the destinations of the export trade in 1914-15 so far as they are available. It cannot, however, be regarded as complete, for not only is the import of raw silk by road from Kashmir to Rawalpindi probably not wholly registered, but also a considerable margin must be left for silk imported and exported by passenger train or by postal service. The table will, however, give a general idea of the silk trade, though the figure for imported silk manufactures would undoubtedly be very much higher were any record available for the goods carried as parcels by passenger train or by post.

Silk trade of Punjab and North-West Frontier Province, 1914-15

IMPORTS			EXPORTS		
Nature of silk and whence imported	Maunds	Rs	Nature of silk and whence exported	Maunds	Rs
<i>Indian Raw Silk</i>			<i>Indian Raw Silk</i>		
By Rail—			By Rail—		
From—			To—		
Bombay	36	13,161	Karachi	831	2,81,056
United Provinces	85	34,200	United Provinces	95	32,261
Kashmir	37	12,167	Other places	53	18,142
Other Places	68	35,326			
TOTAL	226	94,854	TOTAL	979	3,31,459
<i>Foreign Raw Silk</i>			<i>Foreign Raw Silk</i>		
By Rail—			By Rail	Nil	Nil
From—			By Road—		
Bombay	4,292	17,23,730	To—		
Karachi	386	1,46,784	North and East Afghanistan	278	71,450
Other places	3	1,197	Dir Swat, and Bajaur	7	2,100
By Road—			Buner	1	250
From Ladakh	1,141	4,55,915			
TOTAL	5,822	23,27,626	TOTAL	286	73,800
TOTAL OF RAW SILK	6,048	24,22,480	TOTAL OF RAW SILK	1,265	4,05,259

CHAPTER IV.

The Silk Trade of India: Summary and Conclusion.

Raw silk exports.

1 In the preceding pages the trade of Bombay, Madras and the Punjab has been reviewed in detail. An attempt will now be made to give a general idea of the present state of the silk trade of India as a whole. In Table II of Appendix B will be found the figures for the exports of Indian raw silk chassam or waste, and cocoons out of British India from 1889-90 to the present time. From this table it will be seen that it is a mistake to suppose that there has been a steady decline in such exports during the last quarter of a century. Until 5 years ago (1909-10) the variations in the amount exported were normal, and in that year the figure (*viz*, over 2 million lbs) was higher than it had been since 1889-90. The following table will show at a glance that instead of having decreased the total export has increased in quantity during the last 40 years, and even previous to that the figure for 1864-65 to 1873-74 is subject to some reduction, re-exports of foreign raw silk being included for the years 1864-65 to 1867-68 —

Exports of raw silk from India

Average for 10 years—

	lbs
1861 05—1873 74	2,065,272
1874 75—1883 84	1,401,025
1884 85—1893 94	1,744,109
1894 95—1903 04	1,717,601
1904 05—1913 14	1,740,023

It will be noticed, however, that the figure for reeled silk (the most valuable part of the export), though it rose in 1906-07 and the following year higher than it has reached for a great number of years, has since then been steadily decreasing, and for five years has been lower than at any other time in the last quarter of a century. The value of the total export has correspondingly decreased, in spite of a fairly steady average in chassam and cocoons, though the former of these also shows a decrease from the very high figure reached in 1909-10 (nearly 1½ million lbs). The average value of the whole export is given in the following table —

Average value of export of raw silk from India.

For 5 years—	Lakhs Rs
1889-90 to 1893 94	60
1894 95 to 1898 99	52½
1899 1900 to 1903 04	63½
1904 05 to 1908 09	58½
1909 10 to 1913-14	42½

It is therefore only within the last five or six years that there has been any serious decrease in the whole export trade, less than ten years ago (*i e*, in 1906-07 and 1907-08) the value having been well above the average of the last twenty-five years. Within those few years, however, the decrease has been starting. The export of reeled silk fell in 1913-14 to considerably less than half what it was in the preceding year, and less than two-ninths of the amount exported in the years 1906 to 1908. The export of chassam was steadier, but reached a lower figure than any recorded during the preceding ten years, and the total export (1,203,098 lbs) was the lowest since 1881-82 (when it stood at 1,117,026 lbs). The value (Rs 24½ lakhs) was less than half the normal figure during the last 25 years. In 1914-15 the fall was even greater. Only 516,282 lbs of raw silk were exported from the whole of India during

that year-- the lowest figure reached for a century. Since 1856, in fact, the amount has never sunk to as little as double that figure, and during the last ten years (with the single exception of 1913-14) it has regularly been more than three times the amount exported in 1914-15. The figure for that year cannot, however, be taken as any indication of a permanent decrease in the export trade. The fact that exports to France, which usually takes 70 per cent of Indian raw silk, decreased by 524,901 lbs proves almost conclusively that the war is responsible for the surprisingly low figure reached during that year. None the less, there has been, during the last five years, a steady fall though it was only in 1913-14 that the decrease was of a really startling nature. The fall during that year, however, is also capable of explanation, which proves that it was due in the main to temporary causes. As has been stated elsewhere there was a serious fire in the Kashmir State Filature in August 1913 very heavy damage being sustained. In consequence of this, exports of Kashmir silk to Karachi were very much reduced in quantity, and the Sea-borne Trade Returns for Sind show that exports of raw silk from that province fell from 679,641 lbs, valued at nearly Rs 27½ lakhs, in 1912-13 to only 260,133 lbs valued at rather more than Rs 12½ lakhs, in 1913-14. The decrease in the quantity exported from this single source of supply therefore, amounted to nearly 420,000 lbs in quantity and Rs 15 lakhs in value. The addition of these amounts to the actual figures for the export of raw silk from the whole of India during that year would raise them to about 1,600,000 lbs and nearly Rs 40 lakhs, which are very little less than the figures for the preceding year. While, therefore, it must be admitted that a decrease has become manifest in the exports of the last few years, the abnormally low figures for 1913-14 and 1914-15 are not in the main due to the circumstances, whatever they may be, which are causing this decrease, but to the particular causes shown above.

2 Table III of Appendix B shows the share borne by each of the maritime provinces in this export of raw silk, during the last 15 years. The export from Madras may be taken as almost wholly Mysore silk, while the share of Sind is equivalent to the share of Kashmir silk. It will be seen that until 1908 exports from Bombay were heavy, whereas practically no silk was exported from Sind, but after that year exports from Sind have been large while those from Bombay have shown a heavy decrease. From this it may be concluded that Kashmir silk was until that date mostly consigned to Bombay Port, but since then has been exported from Sind. The exports from Bombay from 1908 to the present time are probably largely Kashmir, but perhaps partly Mysore silk. Exports from Burma are small and unimportant, except in 1912-13 and 1913-14, when they amounted to 29,211 lbs and 24,543 lbs respectively, as against 5,758 lbs during the year 1911-12.

From the totals given in column 7 of the table it is clear that the decrease in raw silk exports has been almost entirely due to the fall in the amount exported from Bengal. Excluding the share of that province, exports have steadily risen from 348,354 lbs in 1899-00 to 1,071,534 lbs in 1912-13. The fall in 1913-14 has already been explained as due to the fire in the Kashmir Filature. Apart from this, Kashmir silk (as represented by the exports from Bombay before 1908 and from Sind after that year) has shown a steady increase, from about 56,000 lbs in 1899-00 to about 700,000 lbs in 1912-13. In the latter year it was actually considerably larger than the export from Bengal. Mysore silk (as represented by exports from Madras) has been subject to continuous fluctuations, rising to 571,840 lbs in 1908-09 and falling to 360,481 lbs two years later. It recovered slightly in 1911-12 but fell again to 301,978 lbs in 1912-13 and even lower in the following year. It has been shown, in the chapter on the Madras Presidency, that exports from Madras now entirely consist of chassam and cocoons, exports of raw silk having ceased in 1906-07. The value of these being very small as compared with raw silk, the exports of Mysore silk gain an exaggerated importance when given in quantity instead of in value. To correct this, another table is given (Appendix B, Table IV). This is identical with Table III, except that instead of quantity in lbs, value in Rs has been given. From this it will be seen that

- Bengal, which in 1899 accounted for practically the whole of the export, sent little more than a quarter (from the point of view of value) in 1912-13. This table also shows that the export from Bombay and Sind is even more important in value than in quantity, having risen from well under half a lakh in 1899 to nearly Rs 28 lakhs in 1912-13. During the same period the value of the whole export (excluding Bengal) has risen from Rs 2 lakhs to nearly Rs 30 lakhs, Bengal exports having fallen from Rs 67½ lakhs to Rs 11½ lakhs. The export of Bengal silk has therefore decreased in value even more heavily than in bulk, and especially during the last five years. In 1909-10 and 1910-11 the Bengal export was still more than 50 per cent of the whole both in quantity and in value. In the following year the share of Bengal remained greater than that of Sind in total bulk, but owing to the fact that more reeled silk was exported from Sind, the value of the latter's export surpassed that of Bengal. In 1912-13 the share of Sind was not only greater than that of Bengal in quantity, but was more than double that of Bengal in reeled silk and consequently in total value. In spite of the heavy fall in exports of Kashmir silk in 1913-14, and in spite of the fact that the share of Sind was reduced in consequence to less than half that of Bengal, nevertheless the value of Kashmir silk exported from Sind was over Rs 12½ lakhs as against Rs 9 lakhs from Bengal, owing to the fact that the latter sent out only half the amount of reeled silk exported from Sind. It is clear therefore that the cause of the decline must be looked for in Bengal.

As regards Madras, it must be remembered that exports of chassam or waste represent a proportionate amount of reeled silk used in this country, and that if such exports remain steady a decrease in the export of reeled silk is not to be regretted, since it only implies that the raw silk which was formerly exported is now used at home. If, however, exports of chassam and of reeled silk are both found to be decreasing it is a probable conclusion that production is on the wane. It will therefore be necessary in order to judge correctly of the present state of production, to consider the exports of chassam and reeled silk separately. For Mysore, such figures have already been given elsewhere (*vide* pages 42 and 45). From those tables it will be seen that exports of chassam did not decline when exports of reeled silk ceased, on the contrary they have been distinctly larger since that date. It is therefore a justifiable conclusion that the production of Mysore has *not* declined, but that more reeled Mysore silk is now used in this country than was formerly the case. Exports from Burma are recorded as being entirely wild silk waste. The proportions of chassam and reeled silk in the exports from Bengal, Sind and Bombay are given in Table V of Appendix B, exports from the two latter ports being combined, as they are both probably composed almost entirely of Kashmir silk. From this table it appears that whereas exports both of reeled silk and chassam from Bengal have decreased, those from Sind and Bombay have both steadily risen. It may therefore be concluded that production in Bengal has declined, while production in Kashmir has increased. But another fact, of equal importance, may be deduced from these figures. It will be noticed that whereas reeled Bengal silk fell in 1912-13 to less than one-seventh, and in 1913-14 to hardly more than one-fourteenth, of what it was 15 years ago, chassam has only decreased by about 50 per cent during the same period. This chassam implies a proportionate quantity of reeled silk, which as it was not exported must have been consumed in the country. The state of production in Bengal must, therefore, be judged rather from the export of chassam than from that of reeled silk, and the smaller decrease in the former proves beyond doubt that production in Bengal has not diminished on anything approaching the same scale as reeled silk exports. The fall has however been serious enough as judged by the exports of chassam, these having, as may be seen, decreased by nearly 50 per cent in the last 15 years. In Table VI is given a list of the exports of raw silk, chassam and cocoons, from Calcutta extracted from the Silk Exports Lists published monthly by D N Bosu. As the quantity is reckoned in bales it is impossible to make an exact comparison between these and the official figures, but they corroborate each other as to the heavy decline in exports from Calcutta. A bale of silk contains about 150 lbs, and a bale of chassam about 300 lbs.

A few words must be added as to the destination of the raw silk which leaves India. From the table given in Appendix B (Table VII) it will be seen that France takes the bulk of these exports. The demand from the United Kingdom appears to be declining, while the quantity exported to Italy is never very large and fluctuates considerably from year to year. The same is true of the demand from the United States. In the case of these countries any increase in export to them from India probably results more from the partial failure of other sources of supply than from any regular demand for Indian material and this is certainly the case as regards the export of cocoons to Italy. Belgium, Ceylon and Egypt have occasionally taken considerable supplies—mostly of waste—from India, and Turkey in Asia used to be a fairly regular, though a small customer. Exports to that country have now however almost ceased for a number of years past.

3. The decrease in exports of Indian silk manufactures has been even more noticeable than that of raw silk. In the case of the latter, it has already been shown that although Bengal silk has steadily fallen, other kinds of Indian silk have partially replaced it. In the case of manufactures, both Bombay and Bengal have shown a marked decrease, though the latter has been the most affected, the former having exhibited an upward tendency during the last eight years. Madras exports were very low between 1904 and 1908 but since then have been steadily rising, reaching in 1913-14 a higher figure than any since 1900. Exports from Madras are, however, comparatively small amounting at the most to less than Rs 1½ lakhs, and averaging during the last five years less than Rs 1 lakh. The increase in these exports therefore, has but little effect in staying the steady decline in exports from India as a whole. Exports from Sind and Burma are insignificant, and consequently there is nothing to replace the exports of Bengal and Bombay. Table VIII of Appendix B shows the exports from India for the last 30 years. It will be noticed that the decline has been practically unbroken during that period. In 1893-94 exports from Bengal amounted to over Rs 18 lakhs, from Bombay over Rs 5 lakhs, and from Madras nearly Rs 1 lakh. Ten years later, in 1903-04, exports from Bengal had fallen to Rs 6 lakhs, and from Bombay to less than Rs 1½ lakhs, while those from Madras were still over Rs 1 lakh. In 1913-14 Bengal exports were valued at less than Rs 2 lakhs, Bombay at over Rs 2½ lakhs, and Madras at nearly Rs 1½ lakhs. The very small total reached in 1914-15 is, of course, partly due to the war. It cannot, however, be altogether ascribed to this cause, for Bombay and Madras exports were far less affected than those of Bengal. The last mentioned amounted to less than Rs 1 lakh, showing a fall of about the same amount, whereas Bombay and Madras exports fell only to rather over Rs 1½ lakhs and rather under Rs 1 lakh respectively. This will be seen clearly from Table IX, which gives separately the exports from these ports, according to the official figures, during the last fifteen years, and Table X, which gives the exports of silk piece-goods from Calcutta during the last twenty years, as shown in the monthly Exports Lists of D. N. Bosu to which reference has been made above.

The export formerly consisted almost entirely of silk piece-goods, but mixed goods have recently shown a tendency to increase, while piece-goods have heavily fallen. The United Kingdom is still the largest importer, but whereas in 1893 she received over Rs 13 lakhs' worth of piece-goods, in 1913-14 the amount was only a little over Rs 1½ lakhs. Mixed goods now go mostly to Tunis and Aden, which countries receive articles averaging over Rs ½ lakh a year each. The Straits Settlements and Natal also import some quantity of these goods, and these countries and Aden take (after the United Kingdom) most of the exports of silk piece-goods. France, Arabia, Persia and Turkey, which formerly imported large quantities of Indian manufactures, now take very little. Details of the countries of final destination and the amount exported to each will be found in Table XI of Appendix B. Exports to Ceylon, the Straits Settlements, and the Malay Peninsula, as also to Natal and North Africa, which combined amounted to more than two-fifths of the total quantity in 1913-14, were despatched almost entirely from Madras. The heavy consignment to Aden was sent by Bombay, as was also the bulk of the exports to France and to Arabia, while those to the United

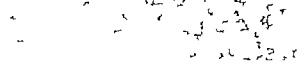
value second to, though a long way behind, those of Bombay. They are received mostly from Shanghai, Hongkong and the Straits Settlements —

Imports of raw silk into Burma by Sea

Imports from	1909-10	1910-11	1911-12	1912-13	1913-14
	lb	lbs	lbs	lbs	lbs
China (excluding Hon, Hong and Macao)	204,260	60,083	153,190	302,458	272,259
Hongkong	31,856	81,121	110,975	118,703	56,751
Straits Settlement	103,073	117,588	125,119	96,930	92,108
Siam			3,615	23,730	29,020
Indo China, etc			160		
Japan	5,489	13,040		7,929	2,133
Total	344,687	271,832	393,089	549,750	453,171
	Rs	Rs	Rs	Rs	Rs
China (excluding Hon, Hong and Macao)	9,98,928	3,18,916	9,43,777	17,16,602	14,89,227
Hongkong	1,90,847	4,44,743	6,54,603	8,20,951	3,97,514
Straits Settlements	5,42,321	5,89,795	6,43,136	4,67,676	4,34,360
Siam			14,580	85,310	1,03,912
Indo China, etc			994		
Japan	28,776	64,852		44,659	16,361
Total	17,59,872	14,18,306	22,57,089	31,44,189	24,40,474

Silk Manufactures

5 The value of the manufactured silk goods imported into India by sea during the last thirty years is given in Table XIII. The increase is here very noticeable, such goods having nearly trebled in value during that period. The chief countries of consignment are given in Table XIV and the value of the imports from each at intervals of five years during the last two decades. It will be seen that very great changes have taken place during that period. In 1893-94 the United Kingdom and Hongkong between them supplied Rs 120 lakhs worth of goods out of a total value of Rs 182½ lakhs, and France supplied half of the remainder. Japan's goods were valued at only Rs 2 lakhs, being surpassed by Shanghai, Belgium, Italy, the Straits Settlements and Germany. In 1913-14 Japan sent goods worth nearly Rs 145 lakhs. Hongkong goods had fallen to Rs 25 lakhs while Shanghai had risen to Rs 38½ lakhs. Meanwhile the consignments from the United Kingdom had fallen to less than Rs 25 lakhs. French goods, at Rs 24½ lakhs, remained fairly steady while Italy and Germany showed large increases rising to Rs 19 lakhs and Rs 22½ lakhs respectively. Thus Japan and China were responsible for Rs 205 lakhs out of Rs. 310 lakhs or two-thirds of the whole and the United Kingdom instead of supplying more than a third as it did twenty years ago supplied only about one-twelfth of the total import.



In Bengal, on the other hand, mixed goods are a great deal more in demand than articles of pure silk —

Imports of silk manufactures into Bengal by Sea

	Silk Piece goods	Goods of silk mixed with other materials	Yarns, noils and warps	Thread for sewing	Other sorts	TOTAL
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1909-10	1,21,875	7,71,240	40,830	3,300	29,070	12,66,315
1910-11	1,71,157	11,12,946	77,426	2,759	31,110	10,25,598
1911-12	1,18,098	6,97,135	72,059	3,560	35,536	11,56,388
1912-13	2,80,949	6,91,816	96,169	7,265	42,987	11,19,189
1913-14	2,61,152	8,71,595	1,52,479	2,966	76,940	13,60,042

The silk piece goods imported into Burma are almost wholly Japanese. These amounted in 1909-10 to nearly Rs 46½ lakhs out of Rs 48 lakhs, and in 1913-14 to nearly Rs 51½ lakhs out of Rs 54½ lakhs. Of the remainder, imports from Hongkong have risen from less than Rs ½ lakh in 1909-10 and 1910-11 to over Rs 1½ lakhs in 1913-14, and imports from the rest of China average about Rs ¼ lakh. Goods from the United Kingdom have increased from about Rs ¼ lakh to nearly Rs ½ lakh in these five years, and imports from the Straits Settlements average about Rs ½ lakh. Mixed goods come to Burma mostly from the United Kingdom, having risen from Rs 1 lakh in 1909-10 to Rs 4½ lakhs in 1913-14. German goods of this nature average Rs ½ lakh or over, and about the same quantity is often received from Belgium. Considerable supplies of this kind of article were also received in 1913-14 from Hongkong and the Straits Settlements. Yarns, noils and warps are now received by Burma almost entirely from Germany and Belgium, the latter being perhaps of Swiss manufacture. Calcutta, on the other hand, receives almost the whole of its import of these articles from Japan, a smaller quantity coming also from Italy. This has only been the case during the last two or three years. Before that, Italy supplied the major portion of the import and Japan's consignments were very small. The supply of mixed goods and piece-goods into Bengal shows greater variations and may be given in tabular form —

Import into Bengal

Goods of silk mixed with other materials

Country whence imported	1910-11	1911-12	1912-13	1913-14	1914-15
	Rs.	Rs.	Rs.	Rs.	Rs.
United Kingdom	1,02,224	72,096	87,151	3,00,282	41,425
Germany	2,74,500	98,920	1,01,710	1,10,226	11,490
Belgium	47,561	1,315	7,338	53,042	
France	7,03,869	4,72,589	4,32,669	2,00,051	1,19,502
Italy	1,70,105	40,191	46,167	1,21,570	2,07,228
Other countries	44,507	8,024	16,781	19,334	7,833
TOTAL	13,42,046	6,97,135	6,01,816	8,73,505	3,87,478

Import into Bengal—contd

Silk piece goods.

Country whence imported	1910 11	1911 12	1912 13	1913 14	1914 15
	Rs	Rs	Rs	Rs	Rs
United Kingdom	97,402	1,27,760	1,23,653	1,10,783	1,12,037
France	1,25,325	26,422	34,875	8,024	13,181
Hongkong	24,960	30,112	13,118	24,162	29,790
China (excluding Hongkong)	15,001	44,642	16,296	20,860	23,651
Japan	1,77,104	1,00,694	74,955	74,354	38,456
Other countries	31,565	18,464	18,052	24,960	7,223
TOTAL	4,71,357	3,48,094	2,80,949	2,63,152	2,21,341

The United Kingdom, therefore, seems to be holding its own in this market, both as regards mixed goods and silk piece-goods. France shows a very heavy decline, and the German mixed goods are not markedly on the increase. The most unusual feature is, however, the continuous decline in the import of Japanese silk goods, while the imports from that country have increased in almost every other port in India. From the comparative insignificance of these imports as a whole, it may be presumed that country-made silk goods are still mostly worn in Bengal. There has been no very great increase in the total quantity of silk goods imported into the province, as the following figures will prove —

Average import of silk manufactures into Bengal

	Rs
From 1899-1900 to 1903-04	10,80,000
From 1904-05 to 1908-09	12,80,000
From 1909-10 to 1913-14	13,60,000

Previous to 1900 imports were, indeed, actually greater — thus in 1893-94 they amounted to Rs 13 lakhs, and the average for the five years ending 1888-89 amounted to over Rs 12½ lakhs in piece-goods alone other goods in addition, to the value of several lakhs of rupees, being received every year. The demand for foreign silk goods in Bengal does not, therefore, seem to be very great, nor does it appear that any increase is to be expected. In Burma, on the other hand, while the present import does not appear to be as great as it was thirty years ago, nevertheless an upward tendency has been clearly visible during the last few years. From 1885-86 to 1888-89 the average import of pure silk goods amounted to about Rs 62¼ lakhs. In 1893-94 it had fallen to a little under Rs 56½ lakhs. The averages for more recent years are —

	Rs
Average from 1899-1900 to 1903-04	nearly 38½ lakhs
Average from 1904-05 to 1908-09	over 47 "
Average from 1909-10 to 1913-14	nearly 56½ "

It has been stated elsewhere that imports of Indian manufactures from Madras into Burma by coasting vessels have very seriously declined of late years and it may be assumed that these increasing supplies from Japan have been gradually replacing the Madras goods in that market. Imports from

Sind closely resemble those received by Bombay and do not need detailed consideration. They consist ordinarily of mixed goods to the value of Rs 2 to Rs 3 lakhs, chiefly from Germany, and from Rs 1 to Rs 2 lakhs of silk piece-goods, mostly from Japan, the United Kingdom and France. The value of imported warps, etc., rose from about Rs 45,000 in 1910-11 and 1911-12 to over Rs 2 lakhs in the two following years. These are received from Switzerland, Italy, the United Kingdom, Germany and France. The chief features of the trade of this port in silk are (1) the increasing import of mixed goods, especially from Germany, until 1914-15 (2) the decline in piece-goods, and especially of the Japanese import in these articles, which fell from over Rs 1½ lakhs in 1910-11 and over Rs 1½ lakhs in the following year, to less than a lakh in 1912-13, only Rs 31,000 in 1913-14, and only about Rs 5,000 in 1914-15. Meanwhile the import of such goods from the United Kingdom has remained steady.

To sum up, the outstanding points of the present import trade of India in silk manufactures are (1) the phenomenal increase in imports from Japan of silk piece-goods (2) the increase of such goods from Shanghai, which however is only a recovery of the position held by imports from Hongkong in former years (3) the heavy fall in imports from the United Kingdom, which however must be qualified by the remark that a rising tendency has been apparent during the last few years (4) a great increase in the mixed goods supplied by Germany, and in articles of all kinds from Italy (5) the growing demand for mixed goods and for yarns, noils and warps, and lastly (6) the small quantity of articles of any of these kinds imported into Madras and Bengal, and the noteworthy fact that imports into the latter province do not manifest any serious increase.

Mercerised Cotton Yarn

6 Before leaving the subject of imports into India by sea, an attempt must be made to estimate the extent to which substitutes for silk have a hold upon the market. The total import of mercerised cotton yarn into British India amounted in 1914-15 to over 1½ million lbs. The principal sources of supply were, as will be seen from the accompanying table, Japan and the United Kingdom.

Imports of mercerised cotton yarn into British India, 1914-15.

From	Into Bombay Ports		Into Madras Ports.		Into Karachi.		Into Calcutta.		TOTAL	
	lbs	Rs	lbs	Rs	lbs	Rs	lbs	Rs	lbs	Rs
United Kingdom	711 688	12,63,678	60 074	1,51 740	103 035	1 82 023	1 150	2,050	905 847	15 89 100
Foreign									300	300
Japan	704,836	10,85,008							794 836	10 85 068
Germany	200	263	11 160	12,125			300	300	11,360	12,388
Switzerland	3,000	3,732			40,934	52 400			53,534	56 132
Italy					8 000	8,476			8,000	18,476
TOTAL	1 530 324	23,42,741	81,134	1,63,474	160 060	2 42,899	1,450	2 350	1,773,877	27 51,464

It is unfortunate that there is no record, previous to 1914-15, to show the quantity of this article imported, but in view of its growing use in several provinces it may be assumed with some certainty that there has been a considerable increase in recent years. The cheapness of the article, combined with its strength as compared with any kind of artificial silk, renders it the most acceptable silk-substitute on the market. It must be noted also that alone of silk-substitutes it enters this country free of duty. There is, it is true, an excise duty on all cotton manufactures, but raw cotton and cotton twist and yarn are exempt from customs duty, and mercerised cotton is classed under the latter head. In view of the fact that the import duty on all kinds of silk and silk substitutes is now 7½ per cent, it is a question whether mer-

mercerised cotton should not also be subject to a similar duty, since it is undeniably used as a substitute for silk. At present it gains an advantage which recommends it in the market even more highly than would otherwise be the case and the popularity of cloth manufactured from this material, both among Europeans and Indians, is likely to lead to the institution of new concerns, like the Vijay Weaving Works of Ahmedabad, solely devoted to the manufacture of this kind of cloth. So far as I am aware, no cotton yarn is mercerised in this country, but the process is a very simple one and apparently the necessary machinery could easily be obtained. If there is no obstacle in the way there can be little doubt that a factory of this nature would find a ready market for the mercerised yarn produced by it. As has been seen, the value of this kind of yarn imported into India amounted in 1914-15 to over Rs 27½ lakhs, which is good evidence of the extent to which it is used in this country, and there is very small fear of the consumption of this article decreasing. Details of the use of this material in India have been given elsewhere, but it may be remarked here that to judge from the small quantity received by Calcutta the use of it is not extensive in Bengal. It will remain to be seen whether the imports into Calcutta increase in the future.

Artificial Silk Yarn

7 It has been stated elsewhere that no separate figures are published in the Sea-borne Trade Returns of the imports of artificial silk yarn into India, and there seems to be some doubt as to the right head under which they should be classed. In Bombay such imports are said to be recorded under 'Haberdashery, and in Madras under 'Articles not otherwise specified,' though in any case they pay a duty of 7½ per cent. From unpublished records kept by the various Customs Offices, however, it appears that the amount imported is small. During the eleven months from April 1914 to February 1915 the total value of such imports into Bombay amounted only to Rs 1,52,260. Similarly the imports into Karachi for one year amounted in value to Rs 64,000. No artificial silk is used in the Madras Presidency and imports of this material into the Madras Ports are *nil*—or at any rate entirely negligible. A small quantity reaches Calcutta, as the following table will show.—

Imports of artificial silk yarn into Calcutta

Year	From United Kingdom		From Italy		TOTAL	
	lbs.	Rs	lbs	Rs	lbs	Rs
1912-13 . .	73	681	..	..	73	681
1913-14 . .	488	945	660	868	1,148	1,817
1914-15 . . .	..	..	..	..	..	..
1915-16 . . .	851	573	..	..	851	573

According to the values here assigned the price of this article has fallen from over Rs 9 per lb in 1912-13 to less than 11 annas per lb in 1915-16. This can hardly be correct, especially as elsewhere in India the price is universally said to have risen since the outbreak of war. The quantities imported are, however, very small and the exact value is unimportant. From these figures it appears that the total imports of this material into India cannot amount to more than from Rs 2 lakhs to Rs 2½ lakhs a year and this is probably a fairly generous estimate. Of this amount 75 per cent is said to go to the Punjab, where it is used in some quantity at Amritsar and Ludhiana. The source of supply is said to be France and Switzerland but most of the import into Calcutta seems to be from the United Kingdom and

it is possible that this is the source also of the Bombay and Karachi supplies. In Amritsar the price is said to have risen from Rs 4 to Rs 7 per lb, in Bombay itself the figures are put at Rs 2-2 and Rs 6. It is not used in Benares. It is said that a very small quantity—estimated at Rs 1,000 value a year—used to be received there from Switzerland, but it was found very weak and useless when wetted and in consequence none at all is now used. It is therefore practically only in the Punjab that it is employed in any quantity, and the natural defects of the article and the small total import into India lead to the conclusion that there need be no fear of its becoming a serious competitor of natural silk. These defects are its loss of strength when wetted, and the fact that it is said to be almost impossible to dye it a uniform colour. Under such circumstances, though a small quantity may be used for embroideries, or for the weaving of particular classes of articles—ribands and the like,—there is not likely to be any great demand for it for the purpose of regular weaving, and as a substitute of real silk it is not of any great importance.

Re-exports

8. A certain portion of the silk imported into India, both raw and manufactured, is regularly re-exported to other countries. The following table shows the average quantity of raw silk disposed of in this way —

	Lbs
For five years ending 1874-75	125,746
For five years ending 1879-80	175,868
For five years ending 1884-85	160,196
For five years ending 1889-90	109,272
For five years ending 1894-95	116,593
For five years ending 1899-1900	75,922
For five years ending 1904-05	73,072
For five years ending 1909-10	80,943
For five years ending 1914-15	35,825

In 1914-15 the total amount was only 14,305 lbs, as against 21,371 lbs in 1913-14, but this decrease cannot be attributed wholly, or even mainly, to the influence of the war, since the quantity re-exported in 1911-12 was only 17,014 lbs, though it rose again in 1912-13 to 56,155 lbs. It appears therefore that India is rapidly losing her place as a distributing centre for raw silk. The trade was never, however, of great value. From 1889 to 1893 the total re-exports amounted to from Rs 3½ lakhs to Rs 4 lakhs; they are now valued at Rs ¼ to Rs 1 lakh. Re-exports of silk manufactures are of considerably greater value, and in these an increase is apparent. Table XV of Appendix B gives the figures for the last quarter of a century. It will be seen that the total amount, after remaining steady until 1896-97, then experienced a sudden drop, again remaining fairly steady until the last two years, when the figure has again risen to its old level. On the whole, therefore, the increase in re-exports of manufactures has more than counter-balanced the decline in raw silk, and the extent of that increase can be judged from the fact that the average yearly value in the five years 1885-86 to 1889-90 was only Rs 4,85,000, whereas during the years 1909-10 to 1913-14 it was over Rs 7 lakhs. Practically the whole of this trade is borne by Bombay Port, only a small and variable portion of the trade in re-exports of raw silk falling to the share of Karachi and Rangoon, and in silk manufactures to Calcutta and Madras, in addition to the ports above-mentioned. Raw silk so re-exported generally goes chiefly to the United Kingdom, but to judge from the assigned values, this must be almost entirely silk waste. What really appears from the values to be reeled silk, goes principally to Muskat Territory and to Aden and its dependencies. Re-exports of manufactures are mainly silk piece-goods, the quantity of mixed goods disposed of in this way being comparatively small. These piece-goods are almost entirely exported from Bombay, and go chiefly to Muskat Territory, which in 1912-13 and 1913-14 received over

one-fifth of the total re-exports of this nature. Considerable quantities are also received by Natal, Zanzibar British East Africa and other places within the British Empire. The accompanying table shows the total re-exports of silk manufactures in 1913-14, and the principal countries of final destination, and for the sake of comparison the same details are given for 1893-94 to show the direction of the trade twenty years ago.

Re-exports of silk manufactures (including yarn).

Exports to	1913-14	1893-94
	Rs	Rs
United Kingdom	25,545	7,440
Gibraltar	55,185	65,740
Bahrein Islands	61,935	
Ceylon	87,240	86,015
Straits Settlements	24,960	17,040
Natal	93,100	16,720
Zanzibar and Pemba	1,62,255	63,861
East African Protectorate	60,210	
Aden and Dependencies	12,405	19,954
Malta	5,010	36,297
Mozambique		18,833
Egypt	9,585	97,830
Mauritius		17,666
France	15,300	15,355
Italy	31,650	17,9
Muskat Territory	1,85,355	
Arabia	4,440	63,127
Persia	75,750	1,20,770
Turkey in Asia	24,915	25,102
Japan	30,480	
Portuguese East Africa	25,560	
German East Africa	21,315	
Tunis and Tripoli	10,205	
China	14,100	12,474
Other places	23,760	11,154
GRAND TOTAL	10,95,360	7,06,777

Transfrontier Trade

9. Trade between British India and foreign countries by land routes is carried on over the frontiers of Burma, Assam, Bengal, the Punjab, and the North-West Frontier Province. Details of the two last-mentioned provinces have been given elsewhere. Of the Burma trade the most noticeable feature is the growing importance of imports, and particularly of imports of raw silk. The countries with which this trade is carried on are Western China, Siam,

and the Shan States The following tables give details for the years 1904-05, 1909-10 and 1913-14 —

Frontier Trade of Burma

Imports from	1904-05		1909-10		1913-14	
	Raw	Manufactured	Raw	Manufactured	Raw	Manufactured
	Mds	Rs	Mds	Rs	Mds	Rs
W China	1,115		790	735	2,597	
S Shan States	4	92,446	75	40,660	178	47,026
S Siam	11	1,27,090	6	2,18,705		6,25,033
N Siam	2	1,99,705		52,500		1,61,597
TOTAL QUANTITY IN MDS.	1,132	195	871	103	2,775	269
TOTAL VALUE IN RS	4,56,000	4,19,241	3,87,751	3,12,600	12,64,030	8,33,656

Exports to	1904-05		1909-10		1913-14	
	Raw	Manufactured	Raw	Manufactured	Raw	Manufactured
	Mds	Rs	Mds	Rs	Mds	Rs
W China		4,475				
N Shan States	1	81,651	23	1,12,112		35,415
S Shan States	65	4,58,274	96	2,98,978	47	5,77,419
N Siam	27	1,05,674	40	2,55,855	69	1,08,317
S Siam		43,084		1,20,786		60,900
Karrunt		22,764		19,139		46,721
TOTAL QUANTITY IN MDS	93	575	159	601	116	491
TOTAL VALUE IN RS.	46,287	7,75,922	87,617	8,06,870	59,736	8,28,772

On the Burmese frontier, therefore, imports of silk exceed exports at the present time, but no information is available as to the nature of the raw silk imported. On the Bengal and Assam frontiers the import trade is very small, and consists almost entirely of manufactured silk. Occasionally, however, small imports of raw silk have been recorded from Nepal, but as to the nature of this silk also no information is available. The trade by these routes is as follows —

Frontier Trade of Assam

Imports from	Manufactured	Manufactured	Manufactured	Manufactured
	1904-05	1909-10	1913-14	1914-15
	Rs	Rs	Rs	Rs
Manipur	687			
Bhutan			3,689	3,150
TOTAL	687		3,689	3,150

Frontier Trade of Assam—contd

Exports to	1904 05		1909 10		1913 14		1914-15	
	Raw	Manu- factured	Raw	Manu- factured	Raw	Manu- factured	Raw	Manu- factured
	Mds	Rs.	Mds	Rs	Mds	Rs	Mds	Rs.
Bhutan	103	15,674	68	11,762	1,257	3,76,768	1,304	4,40,004
Tawang		8,468		1,116	2	2,343	2	1,515
Aka and Daffa Hills		10,425						548
Abor, Mishmi, etc , Hills		330		1,500				
Manipur		330						
Hill Tipperah		500						
TOTAL QUANTITY IN MDS	103		68		1,259		1,306	
TOTAL VALUE IN RS	15,403	35,727	9,266	14,378	2,99,679	3,79,111	3,12,575	4,42,067

The enormous increase in exports, both of raw and manufactured silk, to Bhutan during the last two years is remarkable. The increase in 1913-14 is ascribed by the Director of Land Records and Registration partly to the fact that large purchases were made for the Maharaja of Bhutan. The still higher figure for 1914-15 appears to show that the cause is not merely a temporary one, it is ascribed to the fact that the Bhutias were encouraged to visit the plains in larger numbers on account of the high prices prevailing for ponies and the larger demand for cattle.

Details of the Bengal frontier trade follow —

Frontier Trade of Bengal

Imports from	1904-05	1909 10	1913-14	1914-15
	Manufactured	Manufactured	Manufactured	Manufactured
	Rs	Rs	Rs	Rs
Nepal				
Tibet	2,500	4,080	1,800	
Bhutan	1,607		60	
TOTAL	4,107	4,080	1,860	
Exports to	1904-05	1909 10	1913 14	1914-15
	Manufactured	Manufactured	Manufactured	Manufactured
	Rs	Rs	Rs	Rs.
Sikkim	11,619	11,410	450	
Nepal	19,255	2,373		360
Tibet	32,061	26,820	96,297	36,247
Bhutan	15,857		2,651	1,760
TOTAL	78,792	40,603	99,398	38,367

Balance-sheet of Indian Trade in raw silk 1913-14

Imports			Exports		
	lbs	Rs		lbs	Rs
<i>Sea-borne.</i>			<i>Sea borne.</i>		
Raw Silk—			Foreign Re-exports—		
Into Bombay	2,018,901	96,67,845	From Bombay	20,261	99,541
„ Burma	453,171	24,40,483	„ Sind	1,110	3,580
„ Sind	6	9	TOTAL	21,371	1,03,121
„ Madras	91,642	4,81,306	Indian Raw—		
Waste—			From Bengal	32,961	4,65,055
Into Bombay	73,558	1,10,473	„ Sind	107,261	10,63,485
„ Bengal	660	870	Indian Chassam—		
„ Madras	4,854	4,295	From Bombay	71,380	76,300
TOTAL	2,642,792	1,27,05,281	„ Bengal	444,680	3,63,813
<i>Transfrontier</i>			„ Sind	112,408	1,38,325
Into Burma	228,937	12,64,030	„ Madras	256,066	1,75,776
„ Assam			„ Burma	24,543	22,059
„ Bengal			Indian Cocoons—		
„ North West Frontier			From Bombay	2,932	3,361
„ Punjab	91,410	4,91,221	„ Bengal	74,271	85,259
TOTAL	320,347	17,55,251	„ Sind	40,764	62,005
GRAND TOTAL	2,963,139	1,44,61,032	„ Madras	15,832	15,680
			TOTAL	1,203,098	24,74,142
Deduct Exports	1,344,960	29,57,968	<i>Transfrontier</i>		
Balance	1,618,179	1,15,03,064	From Burma	9,570	59,736
			„ Assam	103,909	2,99,679
			„ Bengal		
			„ North-West Frontier	7,912	21,279
			„ Punjab		40
			TOTAL	120,491	3,80,705
			GRAND TOTAL	1,314,069	29,57,968

It will be seen that exports by transfrontier routes, which amounted to 20,000 lbs in 1904-05, had risen to 120,000 lbs in 1913-14, in consequence of the great increase in the Assam trade to which reference has been made already. It is also noticeable that the total exports have only fallen by about 70,000 lbs in these nine years, but that their value has decreased from almost Rs 52 lakhs to Rs 29½ lakhs. This is almost entirely due to the decline in exports of raw silk and the substitution of chassam and cocoons. It is not worthy also that imports by transfrontier routes are on the increase having risen from Rs 4½ to Rs 12½ lakhs in Burma. Imports over the Punjab frontier have, it is true, fallen by nearly Rs 10 lakhs but it cannot be doubted that this is largely due to the accident in the Kashmir Filature. The full result is that the net import of raw silk into India is now more than twice as great in quantity and nearly three times as great in value as it was only nine years ago. This is considerable enough to rouse anxiety as to the tendency of production in India but if we compare the conditions prevailing at a still earlier date we find that the present increase is thrown into an even stronger light. Imports by sea were in 1889-90 it is true even greater than in 1904-05 but exports by sea amounted during the former year to over 2 millions lbs.

against less than $1\frac{1}{2}$ million in 1904-05. A balance sheet for the year 1889-90 will be as follows —

*Balance sheet of Indian trade in raw silk, 1889-90 **

		Imports	Exports.
		lbs	lbs.
<i>Sea borne —</i>			
Foreign raw silk		2,360,467	116,261
Indian raw silk			2,089,762
<i>Transfrontier</i>		45,024	3,584
Total		2,405,491	2,203,607
<i>Deduct Exports</i>		2,203,607	
Balance		195,884	

During the last quarter of a century, therefore, imports of raw silk from all sources have risen from less than $2\frac{1}{2}$ million lbs to nearly 3 millions, exports have fallen from 2 200 000 to 1,340,000 lbs, and the net import into India has increased from less than 200,000 lbs to over $1\frac{1}{2}$ millions

Balance sheets for the trade in silk manufactures follow —

Balance sheet of Indian Trade in manufactured silk 1904-05

Imports		Exports	
<i>Sea borne</i>	Rs	<i>Sea borne</i>	Rs
Into Bombay	1,49,15,721	Foreign Re exports— From Bombay	5,84,882
„ Burma	12,57,810	„ Burma	9,305
„ Bengal	14,35,025	„ Bengal	4,673
„ Sind	3,34,593	„ Sind	2,262
„ Madras	2,08,353	„ Madras	820
TOTAL	2,11,81,502	TOTAL	6,01,942
<i>Transfrontier</i>		Indian—	
Into Burma	4,19,241	From Bombay	1,34,749
„ Assam	687	„ Bengal	5,76,390
„ Bengal	4,107	„ Burma	4,471
„ North West Frontier		„ Sind	.
„ Punjab		„ Madras	14,992
TOTAL	4,24,035	TOTAL	7,30,602
GRAND TOTAL	2,16,05,537	<i>Transfrontier</i>	
<i>Deduct Exports</i>	22,24,895	From Burma	7,75,922
Balance	1,93,80,642	„ Assam	35,727
		„ Bengal	78,792
		„ North-West Frontier	
		„ Punjab	1,910
		TOTAL	8,92,351
		GRAND TOTAL	22,24,895

*Vide "Dictionary of the Economic Products of India" (G Watt), para. 2168, from which the figures for transfrontier trade have been taken

Balance-sheet of Indian Trade in manufactured silk 1913-14

Imports		Exports	
	Rs		P.
<i>By Sea</i>		<i>Sea-borne</i>	
Into Bombay	2,26,03,030	Foreign Re exports—	
„ Burma	62,12,222	From Bombay	9,34,029
„ Bengal	13,69,042	„ Burma	12,771
„ Sind	6,60,681	„ Bengal	10,043
„ Madras	1,66,316	„ Sind	37,482
TOTAL	3,10,11,291	„ Madras	1,387
<i>Transfrontier</i>		TOTAL	10,65,372
Into Burma	8,33,656	Indian—	
„ Assam	3,680	From Bombay	2,31,275
„ Bengal	1,860	„ Burma	956
„ North West Frontier		„ Bengal	1,90,310
„ Punjab	2,448	„ Sind	300
TOTAL	8,41,653	„ Madras	1,45,261
GRAND TOTAL	3,18,54,944	TOTAL	5,68,102
<i>Deduct Exports</i>	32,49,981	<i>Transfrontier</i>	
Balance	2,86,04,963	From Burma	8,28,772
		„ Assam	1,79,111
		„ Bengal	99,394
		„ North West Frontier	4,000
		„ Punjab	3,60,226
		TOTAL	16,76,503
		GRAND TOTAL	32,49,981

In some respects the changes in this trade resemble those which have taken place in the case of raw silk there are, however, certain noteworthy differences. In the first place, exports over the frontiers have so increased that they were in 1913-14 nearly double the value of those recorded in 1904-05. It is also noticeable that such exports are the most important item on that side of the balance-sheet, and consequently, in spite of a decrease in sea-borne exports of Indian manufactures, exports as a whole have increased by over Rs 10 lakhs. On the other hand, imports over the frontier have also increased from Rs 4¹ to nearly Rs 8¹ lakhs, and imports by sea from under Rs 2¹2 to over Rs 3¹0 lakhs. The net import has therefore risen by nearly Rs 1⁰0 lakhs, and adding the values of raw and manufactured silk the net import, which in 1904-05 amounted to Rs 2,35 lakhs, now amounts to over Rs 4⁰0 lakhs, the gross import of silk of all kinds being in 1913-14 over Rs 4⁰3 lakhs in value.

The Silk Industry

11 It would be unsafe to draw conclusions as to the present state of production in this country from the great increase in the imports of raw silk. This increase may be for the purpose of replacing indigenous supplies which are taken upon the looms or it may imply an increase in the amount of foreign silk which takes place in the country. On the other hand the fall in production of raw silk

have been greater than the rise in imports, and less weaving may now be done than was formerly the case. Estimates of production cannot, at the best, be very satisfactory and actual figures as to the output of Bengal and Mysore silk are impossible to obtain. For making such estimates practically the only materials available are the figures for the area under mulberry cultivation and the census figures. The latter are, of course, no direct guide as to the production of silk but they supply information, more or less reliable, concerning the present and past state of the weaving industry. From a recent mulberry census taken in Bengal, the area under mulberry now appears to be as follows —

District	Quantity of mulberry lands given up within the last five years	Quantity of old mulberry lands	Quantity of new mulberry lands
	Acres	Acres	Acres
Murshidabad	2,121	3,028	96
Burduham	133	932	26
Rajshahi	621	765	330
Madda	1,751	13,450	311
Total	4,626	17,784	763

From this it appears that in these four districts the present area under mulberry cultivation is 18,547 acres, whereas about five years ago it was 22,412 acres. In addition to this, mulberry is also grown in certain other districts, though to a smaller extent. Although no recent mulberry census has been taken in these districts, the area was, according to enquiries made in 1910-11, somewhat as follows —

	Acres
Midnapur	400
Hoogly (Arumbagh)	60
Burdwan (Kalna)	85
Nadia	50
Bogra	55

or in all about 650 acres. If we allow for some decrease during the last five years in these districts also, the total area under such cultivation in Bengal was in 1910-11 about 23,000 acres, and is now about 19,000 acres. Figures for Mysore have been given elsewhere (*vide* page 44). If that estimate is at all correct, the area under mulberry cultivation in that State was in 1909-10 about 69,500, and in 1912-13 over 67,000 acres. One estimate puts the present area at only 32,000 acres, but, as has been pointed out elsewhere, the available evidence does not support the conclusion that there has been so heavy a fall during the last two or three years. The estimated production of raw silk (excluding chassam), based upon the mulberry area, will be as follows — In 1909-10 the area in Bengal was about 23,000 acres, which should have produced some 115,000 maunds of cocoons, or 700,000 lbs of raw silk. Mysore, with nearly 70,000 acres, should have produced about 2,000,000 lbs. There was also some production in the Punjab, but no figures are available for the year in question, and the amount of raw silk produced can only have been very small. The total quantity of raw silk must have been, therefore, according to such an estimate, about 2,700,000 lbs. In 1914-15 the area in Bengal was about 19,000 acres, which ought to give 100,000 maunds of cocoons, or 570,000 lbs of raw silk. In the Punjab 500 oz of seed were distributed, from which the outturn cannot have been more than 5,000 lbs. As regards Mysore, if we accept the low estimate (*viz*, 32,000) of acreage, the outturn would be about 960,000 lbs. If, however, we accept a higher estimate (say 50,000 acres) the outturn would be about 1,500,000 lbs. It will, perhaps, be

sate to estimate the production of Mysore at from one to one-and-a-half million pounds. Adding the Bengal output, we get a total of from one-and-a-half to two million pounds of raw silk. The decrease between the years 1909-10 and 1914-15 must therefore, on this reckoning, have amounted to about 750 000 lbs. In the former year Bengal exported about 320,000 lbs of reeled silk. In 1914-15 neither exports nor imports were normal on account of the war, and it is safer to take the figures for the preceding year. In that year exports of reeled silk from Bengal amounted to a little over 50 000 lbs. Madras registered no such exports in either year. Deducting these exports, the decrease in the amount of raw silk available for home consumption amounts to about half a million lbs.

It remains to discover how far this decrease has been balanced by increased imports from foreign countries. This may be done in the following way. From the balance-sheet already given it has been seen that the total import of raw silk during 1913-14 was 2,963,139 lbs. Of this 79,072 lbs were silk waste and must be deducted, leaving a total of 2,884,067 lbs of reeled silk. Exports of raw silk (excluding chassam and cocoons) amounted to 302,084 lbs. The net import of such silk was, therefore, 2,581,983 lbs. In 1909-10 imports and exports of raw silk (excluding chassam and cocoons) were as follows —

				Imports	Exports
				lbs	lbs
<i>Sea borne</i>					
Indian	.	.	.		501,135
Foreign	.	.	.	2,330,185	72,617
<i>Transfrontier</i>					
Burma	.	.	.	71,857	13,117
Punjab	.	.	.	9,570	
North West Frontier	.	.	.		825
Assam	.	.	.		5,610
TOTAL				2,411,612	597,704

This leaves a net import of 1,818,305 lbs., or 763,675 lbs. less than the balance for 1913-14. According to the estimate of mulberry acreage the decrease in production in India amounted to about 750,000 lbs. between the years. If, therefore, the figures are at all correct, the increase in net import corresponds almost exactly with the decrease in the production of the Indian raw material, and foreign raw silk has merely replaced Indian silk upon the looms to the extent to which the latter has decreased during the last five years, nor does there appear to have been less raw silk in use, which, had it been the case, would have argued a decline in the weaving industry.

12 The census figures support the view that the weaving industry is not declining. A comparison of the figures for 1901 and 1911 give the following result —

	1901	1911
Silk exports, cocoons and waste reeled and thrown silk thread		
Madras	55,126	74,777
Bombay	51,000	41,127
Burma	24,029	14,002

	1901 Silk carders, spinners and weavers, makers of silk braid and thread	1911 Silk spinners and weavers
Bengal and Bihar and Orissa	36,050	{ 48,783 8,438
Central Province	16,623	19,454
Punjab and North-West Frontier Province	14,113	13,957
United Provinces	12,657	16,044
Assam	568	1,717
Mysore	4,307	2,478
Kashmir	1,280	5,724
Others	2,621	3,123
GRAND TOTAL	228,443	257,240

A B Local States and Agencies are included in the provincial figures

The increase in 10 years amounts, therefore, to 28,806 persons. During the same period cotton weavers (hand-loom industry), and those engaged in cotton spinning and sizing increased from 5,460,515 to 5,966,468, or by more than half a million. How far weavers who use a small amount of silk but are mostly dealing with cotton material are included under either of these heads, it is impossible to say, but it is evident that the hand-loom industry is not on the down grade. The Provinces and States which show a decrease in the number of persons engaged in silk weaving and spinning are Bombay (-6,932), Burma (-15,408), Punjab and North-West Frontier (-156), and Mysore (-1,829), while all the remainder show an increase, which is greatest in the case of Bengal, Bihar and Orissa (+21,171), Madras (+19,647), and Kashmir (-4,144). According to the census figures for 1911, the chief silk districts now are—Murshidabad (27,338), Tanjore (22,444), Benares (15,044) and Surat (13,209), followed by Mandalay (9,903) and Chingleput (9,545). In Tanjore, Benares, Surat and Chingleput, the industry is certainly flourishing, and local opinion supports the conclusion that the number of persons engaged in the various processes of silk manufacture is on the increase. Of the remaining districts (Murshidabad and Mandalay) I have no definite information, but the very heavy decrease in Burma as a whole during the 10 years between 1901 and 1911 makes it probable that weaving in Mandalay is also declining. If the census figures, however, are at all trustworthy, the industry in India is in a sufficiently flourishing state, though where Bengal raw silk was once largely used China silk has now frequently taken its place.

13 The nature of the weaving which is carried on in the chief silk centres of Bombay, Madras and the Punjab, has already been described. A few details may be added of the silk-weaving industry in Benares, the chief centre in India. In this city a leading merchant estimated the value of the raw silk sold yearly to be more than Rs 4 lakhs, about one quarter of this being Bengal and the rest China silk. This, judging from the number of persons employed, must be an under-estimate. It is said that more raw silk is now used in Benares than was formerly the case, though inasmuch as the whole of the silk used to come from Bengal, the use of that kind of silk has declined. Half the quantity now used is "Minchow" China silk, but Malda silk is still exclusively used for the manufacture of fine *saris*, valued at from Rs 50 to Rs 400 each, except when a white weft thread is required, in which case China silk is employed for the reason that it submits to the process of bleaching better than the Bengal product. The Minchow silk is re-reeled and sells for Rs 21 per seer (of 80 tolas), the "Stock" Chop being apparently

the favourite Kakaria at Rs 16 and Meang at Rs 15 are also largely used, as also Hoing and Chinese Steam Filature Silk, the "Double Butterfly Chop" of the last mentioned kind costing Rs 13 per seer. Malda silk sells for Rs 18 per seer. Only Malda and Minchow are said to be used for making a warp, and Minchow is preferred, being stronger and better reeled. Two or three lakhs' worth of mercerised cotton, and one lakh's worth of spun silk are also said to be sold in the city. Recently a sample of Kashmir silk was submitted to a merchant for his opinion, and (if that opinion is trustworthy) it was found to be better than Minchow, the place of which it might take were it supplied in sufficient quantity. In a separate quarter of the city cheaper goods are manufactured. Here plain spun-silk cloth is woven, besides a certain quantity of pure Malda silk and an inferior cloth manufactured from a Malda weft thread on a spun-silk warp. In spite of the fact that one of the chief of the merchants in this part of the city is a member of the Committee of the Central Weaving Institute, fly-shuttles have not apparently been adopted, at any rate in any quantity, and the plain spun-silk cloth is woven on the ordinary type of loom. The adoption of such a device should greatly increase the output of this class of silk cloth. It is to be noted that in Benares, as elsewhere in India, Minchow appears to be exactly the kind of silk required for warps, and here, where Malda silk is required chiefly for this purpose, complaints are heard of the inferiority of Bengal reeling. The conclusions arrived at will therefore be much the same as in the case of the Madras Presidency.

Winding and Winding Waste

14. Most of the raw silk in use in India contains, in its imported state, not only a quantity of waste but also many variations of quality in the thread. Re-reeled China silk contains no waste and few variations of quality, whereas other kinds contain a large percentage of waste and many gradations of thread. It is consequently necessary, before the silk can be used for making a warp, to eliminate the waste and separate these qualities. This is ordinarily effected by giving the silk to professional winders or sorters, who unwind the raw silk and rewind it according to quality on separate reels, at the same time extracting the unwindable waste. The cost of this process appears to vary in different parts of India. In the Madras Presidency winders ordinarily receive from eight to 10 annas per Madras seer (i.e., 24 tolas). In the Bombay Presidency at Surat, the wages are said to amount to Rs 2 per Bombay seer (i.e., 72 tolas) or slightly more than in Madras, while in the Punjab, at Multan, the rate is stated to be from Rs 2 to Rs 3 per seer. In Ahmedabad it is said that the girls and women engaged on this work are paid at the rate of from Rs 3 to Rs 4 a month. There are, moreover, two different methods of making payment—in some places, as at Salem in Madras, payment is made on the weight of the raw silk, as it is imported and before it is wound, the whole of the silk being returned, in the form of several reels of different qualities of thread and a ball of unwindable waste by the winder to his employer; elsewhere, as at Surat, the winders get paid only on the total weight of the various qualities of wound silk, the unwindable waste being kept by them as their perquisite. The number of qualities into which the raw silk is divided and the amount of each kind also appears to vary in different provinces and according to the skill of the individual winder. Thus in Amritsar where a great deal of very coarse silk is used (*Methia*, *Susa*, *Sikka*, etc.) the silk does not appear to be ordinarily divided into different qualities at all, only the unwindable waste (*suf*) being extracted. The Chinese silks used (*Hoing* and *Meang*) contain a considerable amount of such waste, but Yaikand very little. In Multan on the other hand, China silk is divided into four qualities viz (1) weaving silk fetching Rs 17 per seer (2) thread, used locally for coarser weaving (3) coarse thread used for rough sewing and (4) waste (called *suf radi* or *charram*). In Peshawar, China silk is separated into four qualities of windable thread, in addition to waste. Of these the best is used for regular weaving the two next qualities for making lungis and the last and coarsest for purposes of embroidery. It is, however, unusual for more than four different qualities to be obtained

(including waste) In Tanjore, where some 500 families, or about 2,000 persons, are reported to be engaged on this work on behalf of the merchants of Kumbakonam, the silk is ordinarily divided into four qualities, the two finest being termed ' nice ' and ' mota ' respectively, and the two coarsest classed together as *lhesia* or *sidhrai*. From Chinese silk the proportions of the different qualities are said to be (1) five-eighths, (2) two-eighths, and (3) and (4) together one-eighth. In good Mysore or Malda silk only one tola of waste is said to be found. It is, however, admitted that very skilled winders can obtain a small quantity of even finer thread than the first quality ordinarily obtained. In Salem Kakaria is divided into four qualities, of which three are used for weaving and the fourth is waste (*shedaram*), amounting to two to four tolas in a local seer (24 tolas). Kabin is said to contain a greater quantity of waste, but re-reeled Shantung silk none at all. In Kumbakonam the proportion of waste in a seer is said to be—Shantung $\frac{3}{4}$ to one tola, Japanese $\frac{1}{2}$ tola, Indo-China $1\frac{1}{4}$ tolas, Minchow $\frac{1}{2}$ to one tola. In Conjeeveram, out of 24 tolas of Minchow silk, $1\frac{1}{2}$ tolas of very coarse thread is obtained and the same amount of waste. Malda silk contains less, the total quantity of such thread and unwindable waste amounting only to one or two tolas in every 24. This agrees with the Tanjore estimate and also with that of Kumbakonam, which puts the amount of waste as from $\frac{3}{4}$ of a tola to one tola in such silk. The quantity of waste in Mysore silk apparently varies greatly according to the quality of the silk, but ordinarily there appears to be from about one tola to two or even more in 24. Estimates of this nature, however, vary so greatly from place to place that they are not only unreliable, but also seem to show that the merchants concerned are not generally very careful to reckon the amount of coarse thread and waste with any exactitude, in spite of the fact that the real price of the raw material varies considerably according to the quantity of such thread and waste contained in it.

The coarse thread obtained in this way is variously used. In the North-West, a great deal of embroidery is done from silk of this nature, coarse Canton silk (*panjam*, etc.) being used for the same purpose. Multan imports such thread from Amritsar and also from Ahmedabad, but a certain quantity is also dyed in Amritsar and used locally. In Multan also *tukmas* are manufactured from such coarse thread. For this purpose two threads, dyed black, are twisted together, and a number of these are loosely tied and ornamented with silver thread, glass beads, and little balls, brightly dyed, of silk waste. These articles are sold in the bazar for from four to six annas and are used as earrings. In Surat, again, this kind of thread is cleaned by biting off the waste and knotting the ends with the mouth, and used for the manufacture of *vankia* or rough coats. In Coimbatore coarse thread is dyed and used for making fringes to cloth. It is also used in its natural state for packing and tying bundles of raw silk or cloth. In Conjeeveram a regular industry centres round this product. This is the manufacture of cord-girdles (for tying men's under-garments) and of sashes. The former are made simply by twisting the threads into the form of a cord about one-sixth of an inch thick, but the manufacture of the latter involves the use of a specially constructed miniature loom. A warp is first made of ordinary weaving silk, but of coarse quality. This warp is, of course, only as broad as the sash is intended to be, i.e., ordinarily about $1\frac{1}{2}$ to 2 inches. The loom is in consequence so narrow as to resemble a toy. For the weft, the coarsest quality of thread extracted from Chinese or Bengal silk is used, and a rough pattern is made in the cloth. The weaving process is regulated by four pedals attached to the frame. These sashes are about three yards in length and are sometimes provided with pockets. Like the cord-girdles, they are generally woven of silk dyed a red colour, and at each end the threads of the warp are left loose so as to form a fringe. These articles are manufactured in large quantities and very commonly worn in the Madras Presidency. Unwindable waste is mostly sent to the Bombay Mills, where it is used for spinning. It is also used locally in Multan, where it is dyed and made into the balls (*phunri*) on embroidery or on *tukmas*. In Surat it is used, with waste ends of thread, for making tassels (*has*) worn on coats. The winders of Surat say that they receive about 10 annas a lb. for this waste from the local banias, by whom it is sold to the Mills. The value of winding waste and of very coarse thread is of course.

very low as compared with the fine qualities of silk and though (as has been seen) there are many uses to which these articles can be put, it is obvious that the actual cost of any kind of silk is very much enhanced if it contains a large percentage of such material, the quantity of silk suitable for fine weaving being correspondingly smaller. This point has always to be taken into consideration in comparing the relative values of different kinds of raw silk.

SUMMARY

15 We may now sum up the most noteworthy features of the silk trade of India

1 There has been a very great decline in exports of Bengal raw silk to foreign countries. The place of this silk has been partially taken by exports from Kashmir, but these are small in comparison with the Bengal exports of earlier years. There has also been a marked decrease in the use of Bengal silk in India, though this is neither entirely nor even largely due to any demerit of the silk itself, but rather to the decline in production in that province. Were Bengal and Mysore silk produced in greater quantity, and especially could it be produced at a cheaper rate, there are numerous markets ready to take it. The first point is therefore to find a method of increasing, and if possible cheapening, the production of Indian raw silk.

2 The weaving industry is on the whole in a fairly flourishing condition, but the place of Indian silk has been largely taken by a heavy increase in the amount of foreign raw silk imported into this country. In some cases such silk is chosen in preference to the Indian material on the ground that it is more suitable—on account of finer reeling or some other cause—for the purpose for which it is required. More often however, it is used because it is obtainable more easily or at a cheaper rate. To supply the former demand some changes are necessary in the present methods obtaining in this country to supply the latter nothing is needed but greater production and cheapening of the cost.

3 There is a marked absence of organization in the silk trade as it is at present carried on, and a corresponding success on the part of better-organized competitors in the Indian markets. The methods according to which the weaving industry is conducted is wasteful and unsatisfactory. Illustrations of this will be found throughout this report. The introduction of modern methods has met with considerable success in the Madras Presidency, but there are many areas where no serious attempt at such improvements has been made. Where these improvements have been attempted, they are frequently retarded by the small merchant-employers,—the very persons who under the present conditions would profit by the change. The condition of the weaving community is generally very unsatisfactory, as has already been shown. Some system of profit-sharing or co-operation is badly needed for its improvement. In Lyons and St. Etienne in France benevolent societies exist for the purpose of advancing sums to small master-weavers for modernising their plant etc. These societies were approved and supported by the French Government in 1909. In Japan there is a Sericultural Association, established in 1892, said to contain some 150,000 members. This Association has among its objects those of creating a larger market for Japanese raw silk, making investigations and researches regarding sericulture, and attempting to develop sericulture on a co-operative basis. Other bodies exist for the purpose of improving existing methods, and Sericultural Guilds have been formed with the object of removing defects in the practical management of the industry. It is said that silk-rearers are so combined by Government regulations. There are also co-operative societies of all kinds, for advancing funds for finishing and selling the produce of members, and for purchasing material or plant. Such societies are said to number five thousand—or one for every two villages—of which three-fifths are concerned with sericulture, and they are reported to be entitled to concessions of various kinds from Government. That there are many difficulties in the way of organizing production on these lines in this country cannot be denied, but better organization of the industry (on these or on other more suitable lines) is an urgent necessity in this country. A com-

mercial agency for the purpose of discovering the right markets and for the disposal of the produce would fill a much-needed gap in the present method of carrying on the industry

4 There has been a startling decrease in the export of silk manufactures from this country, and a still greater increase in the import of foreign manufactured goods. The use of the latter is most marked in the Punjab. The consumption of Japanese spun silk is particularly noticeable in that province. It is possible that the Punjab is now passing through a stage which the Madras Presidency reached more rapidly, when the advantages of such silk were realized, but not its disadvantages. After a short trial that Presidency largely rejected such silk for ordinary manufactures, and the weaving-masters of the Punjab may yet do the same. The import of foreign piece-goods into that province, however, undoubtedly supplies a real demand, which at present the Indian looms are not able to meet. The heavy Indian silk manufactures are now commonly rejected there in favour of the finely-woven and brightly-coloured Japanese article. Very little attempt has been made in India to meet this demand. Even where, as in Madras, the Indian manufactures are generally preferred, there is still a market for printed and embroidered Japanese goods, and these could only be supplied by mills specially fitted for their production. How far the Punjab market might be courted on behalf of Indian manufactures of the better quality must remain to be seen, but finer weaving, better finish, and above all a careful study of the exact nature of the demand, are indispensable preliminaries to any such attempt.

In conclusion, the possibilities of the silk trade in India are still very great, and the present moment is eminently favourable for their development. The wide range of mixed goods previously imported from enemy countries bears witness to the demand for such goods in India, and with proper organization it should certainly not be impossible to supply most, if not all, of these goods at home. Further, if satisfactory methods can be found for checking the decrease in the production of silk in this country, there does not appear to be anything to prevent the substitution of Indian for foreign raw material upon the looms, for the manufacture of these and other articles. Finely-reeled silk of the best quality is not at all required for the purpose of manufacturing cheap mixed goods of the nature referred to above, and there is no reason why Indian material should not be used. If by increasing and cheapening the production of raw silk in India and by organizing the silk-weaving industry so as to enable it to compete successfully with the weaving of other countries, the demand for silk manufactures in this country could be supplied from this country's looms, there would then be no cause for regret even if the European market for Indian raw silk were never recovered.

APPENDIX A.

Effect of the War upon the Import Trade in Foreign Silk

The following reports by Mr D R Pochaji, Appraiser in the Bombay Customs Department, are of considerable interest and show clearly the effects of the war upon prices and transactions, and indicate the present state of the market. I am indebted to the kindness of that Department for permission to reproduce them here.

1ST REPORT OF MR D R POCHAJI, DATED 27TH DECEMBER 1915 AND
29TH DECEMBER 1915

1 *Raw silk*

Owing to the European war, Great Britain, France, and America displayed but little interest at the beginning of the war in their purchases of raw silk from China (Canton and Shanghai), and consequently Chinese holders were obliged to look to the Indian markets. The Indian merchants taking advantage of this, placed big orders of raw silk at advantageous prices, and side by side the silver market being dull, and with a favourable exchange, great business was put through till the end of November 1915.

After November owing to great floods in China the Canton Raw Silk crop was spoiled, and consequently the European and American buyers had to turn their attention to the Shanghai market, where a bumper crop of raw silk was reported.

As soon as the Shanghai merchants saw the opportunity of the European buyers coming in their market, they raised their prices, and along with the steady rise of silver the prices of raw silk went up in Shanghai, and a great business was done by the European and American merchants, and at the same time the Indian market took up a lot of business for Bombay, hence the prices gradually went up in Bombay.

It seems that if the present prices of raw silk and the high exchange is maintained the demand will fall, and the consumers will then turn their attention to the Bangalore and Bengal raw silk.

Owing to the above high prices now, it seems that the shipments now expected will fall short, thus the China Mail of the 15th December, which left Hongkong, brings about 125 bales of raw silk only, against the normal shipments of about 500 to 600 bales.

2 *Silk manufactures*

In the beginning of the war the Indian market of silk manufacture became very dull here in Bombay. No buyers came forward to make purchases, consequently shipments from China and Japan grew scarce, and the prices went down considerably in China and Japan.

After a period of three months and in the commencement of the Hindu New Year enquiries from all quarters followed, and the prices went up a little bit, and the Indian merchants, taking advantage of this and the low prices ruling in China and Japan, began importing, by that time the consumption in India increased considerably, which naturally told on the market in China and Japan.

At the present time the imports are normal, say just the same as before the war, but the next shipments of silk manufacture will be considerably less, owing to the numerous enquiries for raw silk and silk manufacture from the outer world, especially from America, as may be judged from the fact that the value of raw silk, for various classes of silk manufacture, is going up from 700 yen per picul to the present highest price of 1,200 yen per picul.

This in its turn has had the effect of sending up the prices of the manufactured silk from 25 per cent to 30 per cent in China and Japan.

These causes will affect the imports very much hereafter, and I think the imports of silk manufacture will be about 50 per cent less than during normal times.

2ND REPORT, DATED 22ND MAY 1916

1 *Raw silk*

After putting in the last report of 27th December 1915, the market was going up in January and went up till March.

From April, the first crop of raw silk arrived in the China market, but the quantity was only half that of the previous year.

Owing to the bad weather now prevailing in the interior of China, *z e*, the silk producing countries, the bulk of the silk worms was partly destroyed by bad weather, which made the market of raw silk steadier. Besides, on account of the high prices of silver and the high exchange, the American and Indian markets have made very few purchases for the present.

These reasons will make the prices of raw silk in China fall considerably, and account for the Indian buyers' now buying Bangalore raw silk, which is cheaper and good in quality. This Bangalore raw silk is consumed by the Indian weavers of Sahapur, Belgium and Madras.

2 *Silk manufactures*

In December, on account of the high prices of raw silk ruling in Japan, the American buyers of raw silk paid the highest price of yen 1,400 per picul—a record price. This price remained very firm till the middle of January. Along with the rise in the price of raw silk, the prices for silk manufactures also went up, and when it was seen by the Bombay merchants that the prices had gone up in Japan by about 40 per cent. to 50 per cent., they went in for reckless speculation in the Bombay market, which forced the prices up.

By the middle of April again the prices of raw silk underwent a decline of about 10 per cent. to 15 per cent. and simultaneously the prices of silk manufactures showed a decline.

It seems that the tone of the local market will be steady for some time owing to the large stocks on hand of higher prices, and unless a demand unexpectedly starts, there are less chances of improvement of the market.

It may be convenient to summarise here the trade figures for the year 1914-15, as compared with the preceding year. Imports of raw silk by sea fell from 2,563,720 lbs., valued at Rs 126 lakhs, to 2,303,331 lbs., valued at Rs 113 lakhs. This decline is attributed (in the "Review of the Trade of India in 1914-15") to the over-trading of the two preceding years. Imports from China (including Hongkong) fell from Rs 116 lakhs to Rs 99 lakhs, and the Straits Settlements from nearly Rs 5 lakhs to a little over Rs 2½ lakhs, Japan's consignment increased from 21,610 lbs. to 172,370 lbs., and that of Siam also showed a slight increase. Imports of manufactures fell from Rs 310 lakhs to Rs 194 lakhs. This is directly attributed to the cessation in demand caused by the war. Imports from Japan declined from Rs 145 lakhs to Rs 94 lakhs, and China goods (excluding Hongkong) from Rs 38½ to Rs 34 lakhs. Consignments from Hongkong, however, showed a slight increase, from Rs 25 lakhs to Rs 26 lakhs. Imports from France and Italy fell from Rs 24½ and Rs 19 lakhs to Rs 11½ and Rs 10½ lakhs respectively. Consignments from the United Kingdom declined from nearly Rs 28 lakhs to Rs 11 lakhs, and those of Germany from Rs 22½ lakhs to Rs 4 lakhs. Silk piece-goods decreased from 27,338,000 yards, valued at Rs 192 lakhs, to 17,690,000 yards, valued at Rs 133½ lakhs, mixed goods from 8,164,000 yards, valued at Rs 69½ lakhs, to 3,089,000 yards, valued at Rs 24 lakhs, yarns, noils, and warps from 1,168,000 lbs., valued at Rs 46 lakhs, to 863,000 lbs. valued at Rs 34 lakhs, and other sorts from Rs 3 lakhs to Rs 2 lakhs.

Exports of raw silk fell from 1,203,098 lbs. to 516,282 lbs., the value in 1913-14 being nearly Rs 25 lakhs, and in 1914-15 less than Rs 12 lakhs. Exports to France fell from 712,110 lbs., valued at Rs 18½ lakhs, to 187,209 lbs., valued at Rs 4 lakhs, whereas those to the United Kingdom rose from 276,502 lbs., valued at less than Rs 4 lakhs, to 287,630 lbs., valued at nearly Rs 7½ lakhs. Exports to Italy fell from Rs 1½ lakhs to Rs ½ lakh. Exports of Indian silk manufactures were valued at Rs 3½ lakhs, as against Rs 5½ lakhs in the preceding year, piece-goods falling by Rs 1½ lakhs and mixed goods by Rs 80,000. Aden received only Rs 7,000 worth instead of Rs 73,000 worth, but exports to Tunis fell only from Rs 71,000 to Rs 61,000.

Re-exports of foreign raw silk fell from 21,000 lbs., valued at Rs 1 lakh, to 14,000 lbs., valued at Rs 74,000, and of manufactures from Rs 10 lakhs to Rs 5½ lakhs.

Turning to the transfrontier trade, imports of raw silk from Persia remained steady. Exports of raw silk to North and East Afghanistan rose

from 15 maunds valued at Rs. 21,000 to 275 maunds valued at Rs. 71,000, while exports of manufactured silk fell from Rs. 4,000 to nil. Imports of raw silk from Ladakh and Kashmir fell from Rs. 5 lakhs to Rs. $4\frac{1}{2}$ lakhs while exports of manufactured silk fell from Rs. 3 lakhs to less than Rs. 3 lakhs. Exports of silk manufactures to Tibet fell from nearly Rs. 1 lakh to Rs. 36,000 whereas exports of raw silk to Bhutan rose from Rs. 2,99,000 to Rs. 3,12,000 and of silk manufactures from Rs. 3,79,000 to Rs. 4,42,000. On the Eastern frontier imports of raw silk from Western China fell from nearly Rs. 12 lakhs to Rs. 9 lakhs and manufactured silk from Siam declined from nearly Rs. 5 lakhs to less than Rs. 3 lakhs exports of similar goods to that country remaining fairly steady.

It will be seen, therefore, that there have been very few exceptions to the general fall in value of the trade in silk between India and other countries during the year 1914-15.

APPENDIX B.

I—Imports of Raw Silk and Waste from China into Bombay

Year	China (Hongkong)		China (Treaty Ports)		TOTAL	
	lbs	Rs	lbs	Rs	lbs	Rs
1875 76	1,939,224	53,78,484	5,599	27,349	1,944,823	53,65,833
1876 77	1,028,882	31,80,954	10,959	1,59,714	1,069,832	33,40,668
• • •	• •	• •	• •	• •	• •	• •
1880 81	1,216,456	51,39,146	517,864	25,78,028	1,764,320	77,18,074
1881 82	1,045,526	41,63,988	186,386	8,83,015	1,231,912	50,47,003
1882 83	1,657,784	74,78,098	177,129	8,34,504	1,834,513	83,12,602
1883 84	1,708,703	64,59,317	174,195	8,86,501	1,682,898	73,45,818
1884 85	1,032,496	41,89,565	156,124	8,03,040	1,188,620	49,92,605
1885 86	1,118,297	44,59,456	202,242	10,64,110	1,320,539	55,23,466
1886 87	1,186,068	53,60,823	205,804	10,37,979	1,391,872	63,98,802
1887 88	1,688,777	70,46,654	320,492	15,76,788	2,009,269	86,23,442
1888 89	1,174,217	47,37,793	303,231	15,21,367	1,477,448	62,59,160
1889 90	1,409,677	58,12,051	333,776	17,43,615	1,743,453	75,55,666
1890 91	1,415,557	61,81,839	377,974	19,42,371	1,793,531	81,24,210
1891 92	1,225,734	68,01,377	567,422	30,34,131	1,793,156	98,35,468
1892 93	1,328,987	52,08,260	378,823	20,41,991	1,707,810	72,50,251
1893 94	1,460,180	60,84,025	919,852	46,35,861	2,380,032	1,07,19,886
1894 95	1,313,754	50,83,006	775,729	38,99,583	2,089,483	89,82,589
1895 96	1,514,405	54,32,366	836,977	39,38,923	2,351,382	93,71,289
1896 97	1,540,955	53,75,638	264,687	12,31,308	1,805,642	66,06,946
1897 98	1,176,412	31,48,275	346,880	15,59,062	1,523,292	47,07,337
1898 99	1,144,180	32,52,801	588,555	26,30,007	1,731,735	58,82,808
1899 00	792,404	20,31,854	490,745	23,43,613	1,283,148	43,75,467
1900 01	874,295	28,26,220	1,098,258	54,35,925	1,972,553	82,62,145
1901 02	726,870	21,59,440	874,780	40,13,757	1,601,668	61,73,206
1902 03	729,964	18,69,804	531,724	23,48,447	1,261,688	42,18,251
1903 04	761,310	24,98,246	474,162	23,10,458	1,235,472	48,08,704
1904 05	881,973	28,50,227	502,419	27,16,242	1,384,392	55,66,469
1905 06	708,375	24,31,466	531,547	30,99,462	1,239,922	55,30,928
1906 07	566,402	18,16,516	411,677	22,99,635	978,079	41,16,151
1907 08	704,765	25,12,734	859,972	51,46,089	1,564,737	76,58,822
1908 09	612,969	20,64,902	853,291	48,74,411	1,466,260	69,39,313
1909 10	613,084	18,31,734	1,199,752	58,51,977	1,812,836	76,83,711
1910 11	660,143	19,55,967	1,015,623	47,69,441	1,675,766	67,25,408
1911-12	529,247	17,53,914	1,118,612	59,28,799	1,647,859	76,82,713

I—Imports of Raw Silk and Waste from China into Bombay—contd

Year	China (Hongkong)		China (Treaty Ports)		TOTAL	
	lbs	Rs	lbs	Rs	lbs	Rs
1912-13	(a) 621,230	20,64,276	(d) 2,194,443	1,08,51,251	2,815,673	1,29,15,527
1913-14	(b) 508,920	17,51,909	(e) 1,422,795	75,56,624	1,931,715	93,08,533
1914-15	(c) 453,567	16,62,918	(f) 1,343,116	71,94,970	1,796,683	88,57,888

II—Exports of Indian Raw Silk

Year	Reeled Silk	Chassam	Cocoons	TOTAL	
	lbs	lbs	lbs	lbs	Rs
1889-90	593,425	1,233,494	262,843	2,089,762	63,98,178
1890-91	502,603	1,112,313	145,695	1,760,611	52,10,687
1891-92	518,705	1,012,254	131,560	1,662,519	51,86,271
1892-93	655,338	1,087,500	77,395	1,820,233	61,75,739
1893-94	613,330	1,080,684	77,071	1,771,085	69,80,989
1894-95	510,800	793,892	26,035	1,330,727	50,20,087
1895-96	707,683	1,072,452	12,294	1,792,429	64,21,693
1896-97	595,433	498,713	643	1,494,789	51,16,611
1897-98	622,587	1,037,701	1,742	1,662,030	51,48,504
1898-99	512,830	1,046,541	4,780	1,564,151	45,80,032
1899-00	722,285	1,217,432		1,939,718	69,86,106
1900-01	559,776	1,030,523	13,976	1,604,275	51,22,057
1901-02	727,651	1,165,754	42,356	1,935,761	66,34,209
1902-03	681,852	1,240,689	67,281	1,989,822	65,48,153
1903-04	624,064	1,136,566	101,686	1,862,316	63,42,468
1904-05	506,318	751,355	85,990	1,343,663	49,69,975
1905-06	578,450	1,131,960	68,906	1,779,316	56,39,679
1906-07	777,654	1,095,193	70,591	1,943,438	68,65,018
1907-08	730,733	1,093,384	119,009	1,943,126	63,78,154
1908-09	581,566	1,182,691	69,387	1,833,644	54,05,077
1909-10	501,135	1,485,548	88,929	2,075,612	50,75,737
1910-11	494,035	1,147,243	209,273	1,850,551	50,55,287
1911-12	381,677	1,092,764	275,505	1,749,946	45,83,853
1912-13	382,081	943,143	352,617	1,677,841	41,73,728
1913-14	160,222	909,077	133,799	1,203,098	24,74,142
1914-15	82,700		433,600	516,282	11,91,000

- (a) Includes 6,667 lbs. of waste
 (b) Includes 18,604 lbs. of waste.
 (c) Includes 32 lbs. of waste
 (d) Includes 32,288 lbs. of waste
 (e) Includes 7 lbs. of waste
 (f) Includes 25 lbs. of waste

III —Exports of Raw Silk, showing share of each province

(Quantity in lbs)

1	2	3	4	5	6	7	8
Year.	Bombay	Burma.	Sind	Madras	Bengal.	Total (excluding Bengal)	GRAND TOTAL.
	lbs	lbs.	lbs	lbs	lbs	lbs.	lbs.
1899 00 . .	56,280	14,803	11	277 260	1,591,364	348,354	1,939,718
1900 01 . .	10,091	1,249	100	362,504	1,230,271	374,004	1,604,275
1901 02 . .	69,750	9,411	101	375,738	1,480,761	455,000	1,935,761
1902 03 . . .	168,050	5,597	10	463,822	1,352,343	637,479	1,989,822
1903 04 . . .	171,852	6,314	144	432,767	1,551,239	611,077	1,862,316
1904 05 . . .	141,478	8,312	.	295,378	898,495	445,168	1,343,663
1905 06 . . .	155,997	6,775		485,000	1,130,944	648,372	1,779,316
1906 07 . . .	233,774	7,119		392,695	1,309,850	633,588	1,943,438
1907 08 . . .	310,656	6,045	1,200	377,778	1,247,447	695,679	1,943,126
1908 09 . . .	61,679	7,834	179,413	571,840	1,012,878	820,766	1,833,644
1909 10 . . .	87,524	4,191	297,902	559,550	1,126,445	949,167	2,075,612
1910 11 . . .	53,965		471,232	360,481	964,873	885,678	1,850,551
1911-12 . . .	80,475	5,758	501,086	400,981	761,046	988,300	1,749,946
1912 13 . . .	60,704	29,211	679,641	301,978	606,307	1,071,534	1,677,841
1913 14 . . .	74,312	24,543	260,433	271,898	571,912	631,186	1,203,098
1914 15 . . .	40,017	22,103	101,887	71,719	280,556	235,726	516,282

IV —Exports of Raw Silk, showing share of each province

(Value in Rs)

1	2	3	4	5	6	7	8
Year	Bombay	Burma.	Sind	Madras	Bengal	Total (excluding Bengal)	GRAND TOTAL
	Rs.	Rs	Rs	Rs	Rs.	Rs.	Rs.
1899 00	34,782	9,930	50	1,65,851	67,75,493	2,10,613	69,86,106
1900 01	16,526	750	400	2,41,866	48,62,515	2,59,542	51,22,057
1901 02 .	4,86,989	9,020	382	2,13,654	59,24,164	6,10,045	66,34,209
1902 03 .	9,92,951	4,595	40	3,51,631	51,98,936	13,49,217	65 48 153
1903 04 .	12,93,325	4,220	500	3,36,147	47,08,276	16,34,192	63,42,468
1904 05 .	11,43,562	8,307		1 85,864	36,32,242	13,37,733	49,69,975
1905 06 .	11,05,768	6,971		2,72,913	42,54,027	13,85,652	56,39,679
1906 07 .	11,23,483	6,498		2,18,532	55,16,500	13,48,518	68,65 018
1907 08 .	14,42,359	5,873	3,750	2,31,013	46,95,159	16,82,995	63,78,154

IV.—Exports of Raw Silk showing share of each province—contd

(Value in Rs.)

1	2	3	4	5	6	7	8
Year	Bombay	Burma	Sind	Madras	Bengal	Total (excluding Bengal)	GRAND TOTAL.
	Rs	Rs	Rs	Rs	Ps	Rs	Rs
1908-09 . . .	1,83,757	7,169	11,35,600	2,79,439	37,99,121	16,05,956	54,05,977
1909 10 . . .	83,490	4,018	18,59,815	3,58,434	27,70,980	23,04,757	50,75,737
1910-11 . . .	55,751		20,13,856	2,29,703	27,55,977	22,99,310	50,55,287
1911-12 . . .	55,835	5,702	24,72,900	2,35,752	18,13,664	27,70,169	45,83,853
1912-13 . . .	42,570	21,981	27,41,925	1,85,740	11,81,512	29,92,216	41,73,728
1913-14 . . .	79,664	22,059	12,63,815	1,91,456	9,17,148	15,56,994	24,74,142
1914-15 . . .	29,615	26,000*	6,03,975	53,975	4,78,343	7,12,000*	11,91,000*

V.—Exports of Reeled Silk and Chassam from Bengal, Bombay and Sind

	BENGAL.				BOMBAY AND SIND			
	Reeled silk.		Chassam		Reeled silk.		Chassam	
	lbs	Rs	lbs.	Rs	lbs.	Rs.	lbs	Rs.
1899-00 .	722,199	61,49,598	869,165	6,25,895	87	309	56,204	34,532
1900 01	588,237	42,95,081	672,034	5,67,434	1,539	7,626	8,652	9,300
1901-02	678,871	52,96,240	775,890	6,08,424	48,780	4,56,980	20,955	30,266
1902-03 .	597,597	46,33,078	709,590	5,30,157	84,255	8,91,740	83,805	1,01,251
1903-04	506,842	40,36,499	663,764	5,94,103	116,262	12,08,450	52,279	78,889
1904-05	408,376	31,74,131	427,319	3,96,061	97,942	10,75,050	43,536	68,512
1905-06 .	486,064	37,30,582	605,464	4,84,695	92,386	10,02,250	63,446	1,03,269
1906-07	634,982	50,13,224	640,843	4,69,226	135,922	9,22,127	71,509	1,73,056
1907-08 .	512,142	41,33,559	664,263	4,90,558	218,591	13,33,651	61,794	77,426
1908-09	453,128	34,05,528	532,350	3,66,193	128,438	11,65,570	78,819	1,19,952
1909 10	319,702	23,01,090	762,315	4,25,295	181,433	16,80,105	168,742	3,25,060
1910-11	327,947	23,12,605	578,645	3,81,863	166,088	17,16,200	221,137	2,63,270
1911-12	190,437	14,04,051	501,669	3,41,065	191,240	19,11,000	205,280	3,87,210
1912-13 .	102,587	7,78,708	426,573	3,29,079	279,494	23,10,975	193,073	1,71,700
1913-14 .	52,961	4,65,055	444,680	3,63,813	107,261	10,63,485	183,788	2,14,625
1914-15	28,905	2,69,560	182,165	1,32,115	53,467	5,28,205	74,637	92,551

* Approximate only, exact figure for Burma not available.

[illegible]

VII—Total Exports of Raw Silk from India

Year.	To United Kingdom.	To France.	To Italy	To United States of America	To Other Countries	TOTAL.
	lbs	lbs.	lbs	lbs	lbs	lbs
1889 90	801,501	1,156,412	112,129	5,351	14,366	2,089,762
1890 91	647,945	983,312	117,486	3,210	8,658	1,760,611
1891 92	590,345	1,034,765	27,206	454	9,749	1 662,519
1892-93	482,416	1,179,570	133,482	3,959	15,806	1,820,233
1893 94	510,407	1,136,089	87,215	20,831	7,543	1,771,085
1894 95	426,867	817,295	41,738	1,173	10,654	1,330,727
1895 96	521,705	1,183,878	62,706	3 674	20,466 (a)	1,702,429
1896 97	461,809	991,368	35,872		5,740	1,494,789
1897 98	788,837	838,621	23,833		10,739	1,662,030
1898 99	570,211	922,030	31,494	149	40,267 (b)	1,564,151
1899 00	797,060	1,000,472	36,720	7,003	8,463	1,939,718
1900 01	488,054	1,090,344	18,113	1,490	5,674	1,604,275
1901 02	577,939	1,327,700	17,951	5,976	6,195	1,935,761
1902-03	581,382	1,380,166		23,095	5,179	1,989,822
1903 04	431,858	1,380,029	225	31,592	18,612 (c)	1,862,316
1904 05	441,418	883,806		11,903	6,509	1,343,663
1905 06	380,684	1,334,719	19,614	36,426	7,573	1,779,316
1906 07	431,870	1,420,380	8,330	47,610	35,248 (d)	1,943,438
1907 08	480,460	1,297,245	97,787	29,400	38,234 (e)	1,943,126
1908 09	389,377	1,326,691	100,211	15,645	1,720	1,833,644
1909 10	459,500	1,482,194	123,859	9,690	369	2,075,612
1910 11	390,997	1,354,387	104,367	596	204	1,850,551
1911-12	362,975	1,302,898	79,238	4,550	285	1,749,946
1912 13	345,050	1,269,533	56,340		6,918	1,677,841
1913 14	276,502	712,110	148,025		66,461 (f)	1,203,098

VIII—Exports of Indian Silk Manufactures

Year	Rs	Year	Rs	Year	Rs
1885 86	32,95,836	1895 96	18,33,987	1905 06	7,15,109
1886 87	31,81,076	1896 97	15,98,407	1906 07	6,86,072
1887-88	37,92,972	1897 98	12,60,409	1907 08	8,30,930
1888-89	28,84,872	1898 99	12,81,890	1908 09	7,32,715

- (a) Includes 10,013 lbs of reeled to Ceylon
(b) " 36,382 lbs of waste to Egypt.
(c) " 15,036 lbs of waste to Belgium
(d) " 32,335 lbs. (mostly reeled) to Ceylon
(e) " 30,383 lbs (mostly waste) to Ceylon
(f) " 59,080 lbs. of waste to Belgium

VIII—Exports of Indian Silk Manufactures—contd

Year	Rs	Year	Rs	Year	Rs
1889 90 .	26,07,213	1899 00	12,89,018	1909 10 .	8,17,305
1890 91 .	20,31,808	1900 01	12,54,447	1910 11	7,69,005
1891 92 .	18,39,571	1901-02	10,54,694	1911 12	6,51,450
1892 93	19,71,779	1902-03	9,48,851	1912 13	7,37,835
1893 94 .	24,24,169	1903 04	8,32,669	1913 14	5,68,095
1894 95	16,71,981	1904 05	7,30,602	1914 15	3,44,384*

IX—Exports of Indian Silk Manufactures from Bengal, Bombay and Madras.

Year.	From Bengal.	From Bombay	From Madras
	Rs	Rs	Rs
1900 01	9,05,912	2,27,649	1,14,191
1901 02	7,52,978	2,26,923	74,300
1902 03	7,33,954	1,69,806	50,293
1903 04	6,09,611	1,38,605	78,310
1904 05	5,76,390	1,34,749	14,992
1905 06	5,50,456	1,31,819	17,264
1906 07	4,95,491	1,54,464	15,502
1907 08	5,93,611	2,08,015	20,759
1908 09	4,38,467	2,48,675	44,535
1909 10	4,43,970	3,01,815	67,929
1910 11	4,76,382	2,02,867	85,103
1911-12	3,68,722	1,80,729	1,01,491
1912 13	3,50,346	2,97,578	85,797
1913 14	1,90,310	2,31,275	1,45,261
1914 15	93,694	1,55,588	95,052

X—Exports of Silk Piece-goods from Calcutta (in bales) (Extracted from D. N. B. Co's Silk Exports Lists)

Year	UNITED KINGDOM		FRANCE		Total in Pcs.
	Corah.	Tussar	Corah	Tussar	
1895	103,745	6,084	20,299	10,927	1,31,055
1896	72,587	5,805	24,195	12,271	1,14,758
1897	87,227	7,227	22,205	7,407	1,24,066
1898	90,783	2,912	8,184	2,244	1,04,023
1899	64,662	618	11,900	2,743	79,923

* Including Pussur Corah. Exports from 1894-95 to 1899-00. The total for 1894-95 is 3,44,384 bales, which is the same as the total for 1894-95 in the preceding column.

X — Exports of Silk Piece-goods from Calcutta (in bales) (Extracted from D N Bosu's Silk Exports Lists)—contd

Year	UNITED KINGDOM		FRANCE		TOTAL IN BALES
	Corah	Tusser	Corah	Tusser	
1900 .	80,676	6,148	9,460	3,566	99,850
1901	49,238	5,342	16,170	3,633	74,383
1902 .	29,243	3,538	12,330	5,524	50,635
1903 .	45,629	5,736	4,249	4,745	60,404
1904	23,523	5,702	5,714	1,746	36,415
1905 . .	27,621	2,944	8,031	2,232	40,828
1906 .	28,488	2,780	6,108	1,352	38,728
1907	28,527	3,519	3,599	1,907	37,552
1908 .	18,241	2,760	2,939	1,847	25,787
1909	19,963	4,092	5,848	2,303	32,200
1910 . .	23,430	653	3,591	297	27,971
1911	24,017	1,552	635	.	26,204
1912 .	35,294	2,478	1,263		39,035
1913	16,923	87	1,478		18,488
1914	3,613	167	445		4,225
1915 .	3,589				3,589

XI — Exports of Silk Manufactures, showing countries of final destination

Countries.	1893 94.	1898 99	1903 04.	1908 09	1913 14.
	Rs	Rs	Rs.	Rs.	Rs
United Kingdom	13,32,666	6,26,382	3,60,594	4,34,298	1,62,075
Franco .	3,34,842	1,05,243	94,862	64,701	16,425
Arabia .	3,03,347	37,726	38,916	1,356	13,290
Persia .	1,17,811	50,452	10,957	18,624	6,825
Turkey in Asia .	1,11,660	80,358	39,300	29,614	4,065
Straits Settlements and Malay Peninsula	74,176	1,08,105	94,697	46,358	97,845
Ceylon .	44,281	37,081	7,636	4,942	11,655
Aden	9,041	12,352	6,622	4,188	73,065
Natal	110	11,909	18,467	22,666	48,075
Tunis, Tripoli and Algeria		1,162	61,096	75,319	78,195
Egypt	10,628	46,523	22,862	4,680	8,730
Australia . .	987	59,051	25,300	3,030	2,295
Other places .	78,688*	45,546†	51,361‡	22,039	45,555§
TOTAL	21,24,169	12,81,890	8,32,669	7,32,715	5,68,095

* Includes Rs. 27,417 to Turkey in Europe Rs. 26,132 to Malta and Rs. 14,032 to Zanzibar

† Includes Rs. 11,229 to Turkey in Europe and Ps 10,037 to Mauritius

‡ Includes Rs. 21,811 to Turkey in Europe

§ Includes Rs. 11,970 to the United States

XII—Imports of Raw Silk into India by sea

Year	Quantity	Value
	lbs	Rs.
1880 90		
1890 91	2,360,467	1,06 70 153
1891 92	2 046,239	1,11, 50 687
1892 93	2,701,069	1,26,40 030
1893 94	2,292,816	1,01 60 801
1894 95	2,947,595	1,36 01,789
1895 96	2,494,496	1,03,65,326
1896 97	3,030,510	1,23,29 503
1897 98	2,287,752	87 51 878
1898 99	2,019,608	66,97,717
1899 00	2,250,866	79 76, 559
1900 01	1,691,848	57,60,883
1901 02	2,535,377	1,01,69 402
1902 03	2,128,483	80,96 200
1903 04	1,639,189	55 16,149
1904 05	1,544,315	59,29 527
1905 06	1,858,709	73 41,121
1906 07	1,645,696	71 19 049
1907 08	1,422,467	70 80 273
1908 09	2,050,839	98 15 137
1909 10	2,168,458	1,01,88 981
1910 11	2,339,185	97 61 689
1911-12	2,121,799	85 22 805
1912 13	2,239,105	1 05 97 410
1913 14	3 579 837*	1,71 41 610
1914 15	2 563,720†	1 25 86 52
	2 303 331‡	1 17 00 000

XIII—Imports of Silk Manufactures into India by sea

Year	Value in	Year	Value	Year	Value
	Rs.		Rs.		Rs.
1885-86	1 10 90 470	1886-87	1 17 47 210	1887-88	1 14 26 100
1886-87	1 28 57 770	1887-88	1 14 26 100	1888-89	1 14 26 100
1887-88	1 74 78 170	1888-89	1 14 26 100	1889-90	1 14 26 100

* 1887-88
† 1888-89
‡ 1889-90

XIII—Imports of Silk Manufactures into India by sea—contd

Year	Value in	Year.	Value in	Year	Value in
	Rs		Rs		Rs
1888 89	1,68,21,661	1898 99 .	1,36,17,934	1908 09	2,28,13,727
1889 90	1,77,81,141	1899 00	1,12,98,310	1909 10 .	2,26,69,275
1890 91	1,38,63,620	1900 01 .	1,66,58,108	1910 11	2,76,46,230
1891 92	1,75,06,949	1901 02	1,48,47,009	1911-12 .	2,65,35,930
1892-93	1,80,15,708	1902-03	1,63,23,232	1912 13	3,05,31,015
1893 94	1,82,78,743	1903-04	1,83,34,720	1913-14	3,10,13,295
1894-95	1,27,74,196	1904 05	2,11,81,502	1914 15	1,94,00,000

XIV—Imports of Silk Manufactures, showing countries of consignment

From	1893 94	1898 99	1903 04	1908 09.	1913-14
	Rs	Rs.	Rs	Rs.	Rs.
United Kingdom . .	63,40,310	28,73,826	20,00,880	14,04,906	27,87,285
Austria	5,97,683	1,91,223	5,99,611	3,27,880	2,52,570
Belgium	4,16,949	5,95,770	5,53,199	8,20,196	1,73,310
France	31,43,427	20,12,187	22,43,026	21,52,287	24,59,670
Italy	4,02,127	11,48,377	14,26,525	15,18,407	19,18,020
Germany	2,24,884	2,83,527	5,46,949	10,10,112	22,39,725
Holland .	3,825		1,17,969	8,152	14,715
Switzerland					1,37,400
China (excluding Hongkong) .	7,21,292	14,24,666	22,05,429	28,08,879	38,57,490
Hongkong .	56,65,469	21,51,724	13,67,785	18,78,989	25,23,555
Japan .	2,09,675	24,54,130	66,79,185	99,06,399	1,44,84,330
Straits Settlements .	3,92,317	1,32,423	1,32,157	91,660	1,08,675
Ceylon	65,015	32,455	12,734	36,264	26,205
Russia	1,703	2,72,193	16,054	26,456	10,260
Egypt	18,105	40,448	4,22,909	8,13,647	4,710
Persia .	50,672	30	1,236	2,910	1,050
Others	5,200	4,955	9,072	6,583	14,325
TOTAL	1,82,78,743	1,36,17,934	1,83,34,720	2,28,13,727	3,10,13,295

XV—Re-exports of Foreign Silk from India

	RAW SILK		SILK MANU- FACTURES	TOTAL RE- EXPORTS
	Quantity in	Value in	Value in	Value in
	lbs	Rs	Rs	Rs
1889 00	116,201	3,39,513	5,77,578	9,17,091
1890 01	145,208	4,00,240	6,46,769	10,47,009
1891 02	119,019	3,74,381	6,09,822	10,44,803
1892 03	109,141	3,72,253	7,17,637	10,89,890
1893 04	113,069	3,49,809	7,06,777	10,56,586
1894 05	95,512	2,51,524	9,01,135	11,52,659
1895 06	60,680	1,95,690	8,87,698	10,83,388
1896 07	88,650	2,50,692	7,92,417	10,43,109
1897 08	66,654	1,86,994	5,83,146	7,70,140
1898 09	72,832	1,88,037	4,67,128	6,55,165
1899 00	90,795	1,71,913	4,64,791	6,36,704
1900 01	97,519	1,89,475	5,33,749	7,23,224
1901 02	59,941	1,46,265	6,72,841	8,19,106
1902 03	85,249	1,62,279	7,33,519	8,95,798
1903 04	68,131	1,40,828	6,98,160	8,38,988
1904 05	54,522	1,48,729	6,01,942	7,50,671
1905 06	69,330	1,35,045	6,47,797	7,82,842
1906 07	105,288	3,78,860	6,77,683	10,56,543
1907 08	83,333	1,80,623	5,45,251	7,25,874
1908 09	74,135	1,18,677	4,21,181	5,39,858
1909 10	72,617	1,81,170	4,47,915	6,29,085
1910 11	70,280	1,17,765	5,57,490	6,75,255
1911-12	17,014	88,935	6,80,730	7,69,665
1912-13	56,155	1,25,250	8,23,245	9,48,495
1913-14	21,371	1,03,125	10,05,360	11,08,485
1914-15	14,305	74,000	5,48,000	6,22,000

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